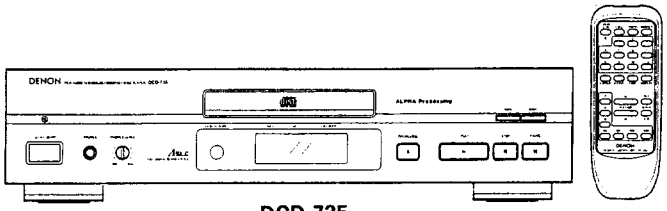
DENON

Hi-Fi Component

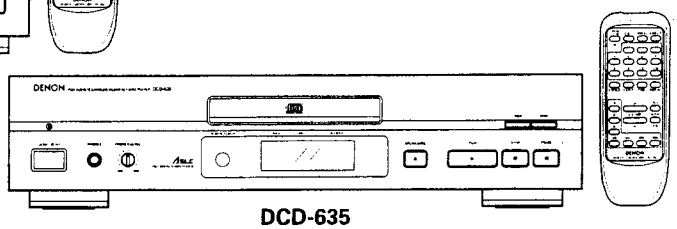
SERVICE MANUAL

MODEL DCD-735
MODEL DCD-635

STEREO CD PLAYER



DCD-735



DCD-635

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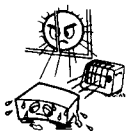
• Some illustration using in this service manual is slightly different from the actual set.

NIPPON COLUMBIA CO., LTD.

NOTE ON USE / HINWEISE ZUM GEBRAUCH / OBSERVATIONS RELATIVES A L'UTILISATION
NOTE SULL'USO / NOTAS SOBRE EL USO / ALVORENS TE GEBRUIKEN / OBSERVERA
OBSERVAÇÕES QUANTO AO USO

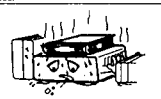


- Avoid high temperatures
  Allow for sufficient heat dispersion when installed on a rack.
- Vermeiden Sie hohe Temperaturen
  Beachten Sie, daß eine ausreichend Luftzirkulation gewährleistet wird, wenn das Gerät auf ein Regal gestellt wird.
- Eviter des températures élevées
  Tenir compte d'une dispersion de chaleur suffisante lors de l'installation sur une étagère.
- Evitate di esporre l'unità a temperature alte
  Assicuratevi che ci sia un adeguata dispersione del calore quando installate l'unità in un mobile per componenti audio.
- Evite altas temperaturas
  Permita la suficiente dispersión del calor cuando esta instalado en la consola.
- Vermijd hoge temperaturen
  Zorg voor een degelijk luchtafvoer indien het apparaat op een rek wordt geplaatst.
- Undvik höga temperaturer
  Se till att det finns möjlighet till god värmeavledning vid montering i ett rack.
- Evite temperaturas altas
  Conceda suficiente dispersão de calor quando o equipamento for instalado numa prateleira.

- Handle the power cord carefully
  Hold the plug when unplugging the cord.
- Gehen Sie vorsichtig mit dem Netzkabel um
  Halten Sie das Kabel am Stecker, wenn Sie den Stecker herausziehen.
- Manipuler le cordon d'alimentation avec précaution
  Tenir la prise lors du débranchement du cordon.
- Maneggiate il filo di alimentazione con cura
  Agite per la spina quando scollegate il cavo dalla presa.
- Maneje el cordon de energía con cuidado
  Sostenga el enchufe cuando desconecte el cordon de energía.
- Hanteer het netsnoer voorzichtig
  Houd het snoer bij de stekker vast wanneer deze moet worden aan- of losgekoppeld.
- Hantera nätkabeln varsamt
  Håll i kabeln när den kopplas från eluttaget.
- Manuseie com cuidado o fio condutor de energia
  Segure a tomada ao desconectar o fio.

- Keep the set free from moisture, water, and dust
- Halten Sie das Gerät von Feuchtigkeit, Wasser und Staub fern
- Protéger l'appareil contre l'humidité, l'eau et la poussière
- Tenete l'unità lontana dall'umidità, dall'acqua e dalla polvere
- Mantenga el equipo libre de humedad, agua y polvo
- Laat geen vochtigheid, water of stof in het apparaat binnendringen
- Utsatt inte apparaten för fukt, vatten och damm
- Mantenha o aparelho livre de qualquer umidade, água ou poeira

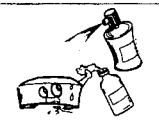
- Unplug the power cord when not using the set for long periods of time
- Wenn das Gerät eine längere Zeit nicht verwendet werden soll, trennen Sie das Netzkabel vom Netzstecker
- Débrancher le cordon d'alimentation lorsque l'appareil n'est pas utilisé pendant de longues périodes
- Disinnestare il filo di alimentazione quando avete l'intenzione di non usare il filo di alimentazione per un lungo periodo di tempo
- Desconecte el cordon de energía cuando no utilice el equipo por mucho tiempo
- Neem altijd het netsnoer uit het stopkontakt wanneer het apparaat gedurende een lange periode niet wordt gebruikt
- Koppla ur nätkabeln om apparaten inte kommer att användas i lång tid
- Desligue o fio condutor de força quando o aparelho não tiver que ser usado por um longo período.



*For sets with ventilation holes

- Do not obstruct the ventilation holes
- Die Belüftungsöffnungen dürfen nicht verdeckt werden
- Ne pas obstruer les trous d'aeration
- Non coprire i fori di ventilazione
- No obstruya los orificios de ventilación
- De ventilatieopeningen mogen niet worden beblokkeerd
- Tapp inte till ventilationsöppningarna
- Não obstrua os orifícios de ventilação

- Do not let foreign objects in the set
- Keine fremden Gegenstände in das Gerät kommen lassen
- Ne pas laisser des objets étrangers dans l'appareil
- E' importante che nessun oggetto è inserito all'interno dell'unità
- No deje objetos extraños dentro del equipo
- Laat geen vreemde voorwerpen in dit apparaat vallen
- Se till att främmande föremål inte tränger in i apparaten
- Não deixe objetos estranhos no aparelho.



- Do not let insecticides, benzene, and thinner come in contact with the set
- Lassen Sie das Gerät nicht mit Insektiziden, Benzin oder Verdünnungsmitteln in Berührung kommen
- Ne pas mettre en contact des insecticides, du benzène et un diluant avec l'appareil
- Assicuratevi che l'unità non venga in contatto con insetticidi, benzolo o solventi
- No permita el contacto de insecticidas, gasolina y diluyentes con el equipo
- Laat geen insektenverdelgende middelen, benzine of verfverdunner met dit apparaat in kontakt komen
- Se till att inte insektsmedel på spraybruk, bensen och thinner kommer i kontakt med apparatens höljе.
- Não permita que inseticidas, benzina e dissolvente entrem em contacto com o aparelho

- Never disassemble or modify the set in any way
- Versuchen Sie niemals das Gerät auseinander zu nehmen oder auf irgiche Art zu verändern
- Ne jamais démonter ou modifier l'appareil d'une manière ou d'une autre.
- Non smontate mai ne modificate l'unità in nessun modo
- Nunca desarme o modifique el equipo de ninguna manera
- Nooit dit apparaat demonteren of op andere wijze modificren.
- Ta inte isär apparaten och försök inte bygga om den
- Nunca desmonte ou modifique o aparelho de alguma forma

IMPORTANT TO SAFETY

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

ADVARSEL: USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING.

VAROITUS! LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAA ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

VARNING- OM APPARATEN ANVÄNDS PÅ ANNAT SÄTT ÄN I DENNA BRUKSANVISNING SPECIFICERATS, KAN ANVÄNDAREN UTSÄTTAS FÖR OSYNLIG LASERSTRÅLNING SOM ÖVERSKRIDER GRÄNSEN FÖR LASERKLASS 1.

NOTE:
This CD player uses the semiconductor laser. To allow you to enjoy music at a stable operation, it is recommended to use this in a room of 5°C (41°F) — 35°C (95°F).

●DECLARATION OF CONFORMITY
We declare under our sole responsibility that this product, to which this declaration relates, is in conformity with the following standards:
EN60065, EN55013, EN55020, EN60555-2 and EN60555-3.
Following the provisions of 73/23/EEC 89/336/EEC and 93/68/EEC Directive

●ÜBEREINSTIMMUNGSERKLÄRUNG
Wir erklären unter unserer Verantwortung, daß dieses Produkt, auf das sich diese Erklärung bezieht, den folgenden Standards entspricht:
EN60065, EN55013, EN55020, EN60555-2 und EN60555-3
Entspricht den Verordnungen der Direktive 73/23/EEC, 89/336/EEC und 93/68/EEC

●DECLARATION DE CONFORMITE
Nous déclarons sous notre seule responsabilité que l'appareil, auquel se réfère cette déclaration, est conforme aux standards suivants:
EN60065, EN55013, EN55020, EN60555-2 et EN60555-3
D'après les dispositions de la Directive 73/23/EEC 89/336/EEC et 93/68/EEC

●DICHIARAZIONE DI CONFORMITÀ
Dichiariamo con piena responsabilità che questo prodotto, al quale la nostra dichiarazione si riferisce, è conforme alle seguenti normative:
EN60065, EN55013, EN55020, EN60555-2 e EN60555-3.
In conformità con le condizioni delle direttive 73/23/EEC 89/336/EEC e 93/68/EEC
QUESTO PRODOTTO E' CONFORME AL D.M. 28/08/95 N. 548

●DECLARACIÓN DE CONFORMIDAD
Declaramos bajo nuestra exclusiva responsabilidad que este producto al que hace referencia esta declaración, está conforme con los siguientes estándares:
EN60065, EN55013, EN55020, EN60555-2 y EN60555-3
Siguiendo las provisiones de las Directivas 73/23/EEC 89/336/EEC y 93/68/EEC

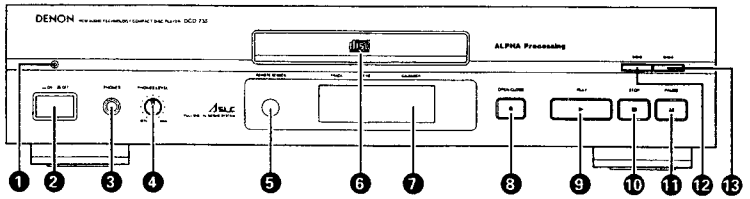
●EENVORMIGHEIDSVERKLARING
Wij verklaren, uitsluitend op onze verantwoordelijkheid dat dit product, waarop deze verklaring betrekking heeft, overeenstemming is met de volgende normen:
EN60065, EN55013, EN55020, EN60555-2 en EN60555-3
Volgens de bepalingen van de Richtlijnen 73/23/EEC, 89/336/EEC en 93/68/EEC

●ÖVERENSSTÄMMELSESINTYG
Härmed intygas helt på eget ansvar att denna produkt, vilken detta intyg avser, uppfyller följande standarder:
EN60065, EN55013, EN55020, EN60555-2 och EN60555-3.
Enligt stadgarna i direktiv 73/23/EEC 89/336/EEC och 93/68/EEC

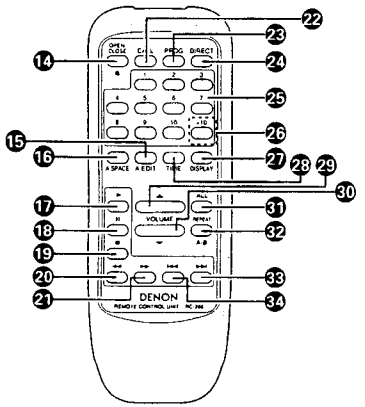
●DECLARAÇÃO DE CONFORMIDADE
Declaramos sob nossa exclusiva responsabilidade que este produto, ao qual esta declaração corresponde, está em conformidade com as seguintes normas:
EN60065, EN55013, EN55020, EN60555-2 e EN60555-3
De acordo com o estabelecido nas Directivas 73/23/EEC, 89/339/EEC e 93/68/EEC

FRONT PANEL
VORDERSEITE
PANNEAU AVANT
PANNELLO FRONTALE

PANEL ANTERIOR
VOORPANEEL
FRONT PANELEN
PAINEL FRONTAL

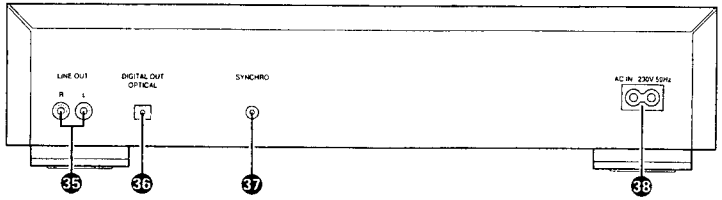


REMOTE CONTROL UNIT
FERNBEDIENUNG
UNITÉ DE TÉLÉCOMMANDE
TELECOMANDO
MANDO A DISTANCIA
AFSTANDSBEDIENING
FJÄRRKONTROLL
UNIDADE DE TELECOMANDO



REAR PANEL
RÜCKSEITE
PANNEAU ARRIÈRE
PANNELLO POSTERIORE

PANEL POSTERIOR
ACHTERPANEEL
BAKSIDAN
PAINEL TRASEIRO



Thank you for purchasing this DENON Compact Disc Player. Please read the operating instructions thoroughly in order to acquaint yourself with the CD player and achieve maximum satisfaction from it.

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Please check to make sure the following items are included with the main unit in the carton:

(1) Operating Instructions 1
(2) Connection Cord 1
(3) Remote Control Unit RC-266 1
(4) R6P AA Dry Cell Battery 2
(5) AC Cord 1

FEATURES

The DCD-735/635 are CD players which use DENON's unique S.L.C. (Super Linear Converter) for eliminating loss of sound quality in the PCM playback section to offer playback of the same sounds as those in the studio or hall where the CD was recorded. In addition, the use of carefully selected parts makes this a high performance CD player reproducing the original sound field with rich musical expression.

(1) Ultimate signal reproduction thanks to the newly developed alpha processor (DCD-735 only)
The high speed interpolation operations of the newly developed alpha processor reproduce the LSB (lowest significant bit) data lost from the disc upon recording to provide a smooth waveform. The audible effects of alpha processing are particularly great during playback at low levels at the instant the sound fades out.

(2) Double Super Linear Converter
The use of DENON's unique system and D/A converters with excellent resolution to prevent zero cross distortion, the main cause of reduced sound quality in the PCM playback system, make for sound field reproduction with rich musical expression.

(3) High Performance Digital Filter
The DCD-735/635 use independent D/A converters for the left and right channels and an 8 × oversampling high precision digital filter to bring out the best of the analog filter and offer clear, crisp sound.

(4) Full Digital Servo System
The DCD-735/635s' Full Digital Servo System is capable of achieving the optimum servo adjustment to match each disc that is played. This feature ensures that the listener enjoys the highest possible quality in sound that a CD can offer.
When the power operation switch is turned on or the disc holder is closed, the adjustment is completed automatically before reproducing the sound.

(5) Simple Playback of 8 cm CD Singles
8 cm CD singles can be played without using an adaptor.

(6) Wireless Remote Control Accessory
In addition to general operations such as Play, Stop and Pause, this remote control unit enables direct selection, direct programming, and other functions. Use of the remote control unit adds greatly to the operating ease of the DCD-735/635, enhancing its outstanding features.

(7) Synchronized Recording Function
Connect the SYNCHRO jack with a DENON cassette deck which is equipped with a SYNCHRO jack, then make a synchronized recording.

(8) Digital Output (OPTICAL)
The data on the compact disc is output in digital format, so the music can be reproduced on an external digital processor or D/A unit.

NAMES AND FUNCTIONS OF PARTS

❶ Power Operation Indicator
- The LED indicates the set's operating status.
- **AC power source is connected and Power Operation Switch is on** ⏏: On (Red)
- **AC power source is connected and Power Operation Switch is off** ⏏: Off
- **AC power source is disconnected:** Off

❷ Power Operation Switch
- When the power operation switch is turned on, "(00)" appears on the TRACK NO. display, and if no disc is loaded, "(00 0000)" appears on the digital display.
- If the power operation switch is turned on with a disc already loaded, the total number of tracks on the disc is displayed on the TRACK NO. display, the total time is displayed on the TIME display, the numbers on the music calendar light up to the number of tracks on the disc, and playback begins.
- Whenever the power operation switch is in the OFF state, the apparatus is still connected on AC line voltage.
  Please be sure to unplug the cord when you leave home for, say, a vacation.

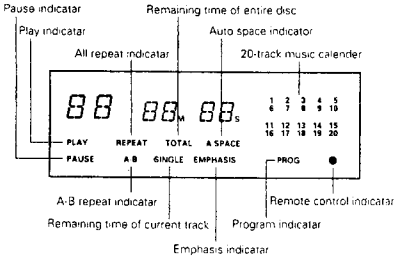
❸ Headphones Jack (PHONES)
- For private listening, you can connect your headphones to this jack. Do not raise the volume level too much when listening through headphones. (Headphones are sold separately.)

❹ Volume Control (PHONES LEVEL)
- Use this to adjust the output level of the headphones.

❺ Remote Control Sensor (REMOTE SENSOR)
- This sensor receives the infrared light transmitted from the wireless remote control unit.
- For remote control, point the supplied remote control unit RC-266 towards this sensor.
- When a signal is transmitted from the remote control unit, the remote control indicator in the display ❼ will light up briefly.

❻ Disc Holder
- Place the disc on the disc holder with the label facing up.
- Use the open/close button (⏏ OPEN/CLOSE) ❽ (⓮) to open and close the disc holder.
- The disc holder may also be closed by pressing the play button (▶ PLAY) ❾ (⓱) or pause button (❚❚ PAUSE) ⓫ (⓲).

❼ Display
- The digital display is divided into sections, such as displays for track number, playback time and calendar, as shown below.



❽ Open / Close Button (⏏ OPEN / CLOSE)
- The disc holder is opened and closed by pressing this button.
- Press this button once to open the disc holder, and once again to close it.
- When the disc holder is closed with a disc loaded, the disc will rotate for a couple of seconds while the disc contents are read. The number of tracks and total playback time on the disc are then displayed on the digital display ❼.

❾ Play Button (▶ PLAY)
- Press this button to start playback of a disc.
- When this button is pressed, PLAY is displayed, and the track number being played is displayed together with the elapsed playback time of the track.
- Tracks are shown on the calendar display. Once a track has been played, the corresponding track number goes out on the calendar display.

❿ Stop Button (■ STOP)
- Press this button to stop playback.
  The disc will stop rotating, and the number of tracks and total playing time of the disc are displayed on the TRACK NO. and TIME displays, respectively.
- In case programmed playback is engaged when this button is pressed, the number of tracks and total playing time of the program are displayed.

⓫ Pause Button (❚❚ PAUSE)
- Press this button to stop playback temporarily.
- If this button is pressed during playback, playback is stopped temporarily, the PLAY indicator goes out and the PAUSE indicator lights.
- Press this button or the play button (▶ PLAY) again to continue playback.

⓬ Automatic Search Reverse Button (|◀◀)
- Press this button to return the pickup to the beginning of the present track. Press again to return to other tracks.
- By pressing the button a number of times, the pickup will move back the corresponding number of tracks.

⓭ Automatic Search Forward Button (▶▶|)
- Press this button to move the pickup forward to the beginning of the next track. Press again to move ahead to other tracks.
- By pressing the button a number of times, the pickup will advance the corresponding number of tracks.

⓮ Open / Close Button (⏏ OPEN / CLOSE)
- Refer to ❽ Open/Close Button.

⓯ Auto Edit Button (A. EDIT)
- The tracks on a CD are automatically split into two halves, Side A and Side B, like an analog disc, with the division at the place between tracks which is closest to 1/2 the total playing time, and with the tracks remaining in the same order.
- When this button is pressed in the stop mode, the total playing time for the first half and the track numbers on the calendar are displayed for approximately 2 seconds. Next, the same is done for the second half, after which the unit is automatically set to the pause mode at the beginning of the first track. When the PLAY or PAUSE button is pressed, playback begins, and the unit is automatically set to the pause mode at the beginning of the first track of the second half which was previously displayed. When the PLAY or PAUSE button is pressed again, playback begins, and the unit is automatically set to the stop mode at the end of the last track on the disc.
- This function will only work for discs with a total of 20 tracks or less. Also, when this function is used the mode is automatically set to the program mode, so direct search is not possible.
- The auto edit function is cleared when the STOP button is pressed.
- The data for the total playing time recorded on the disc and the actual total playing time of the tracks differ, so there may be a difference between the time displayed in the stop mode (the total playing time) and the total of the times of the first and second halves in the auto edit mode (about 2 seconds).

⑯ Auto Space Button (A. SPACE)
- Pressing this button will cause the [A. SPACE] indicator to light and a blank space of approximately 4 seconds is inserted between tracks during CD playback. Pressing the button once more, the [A. SPACE] indicator goes out and the Auto Space feature is cancelled.
- When one of the track search buttons (⏮ or ⏭) is pressed, the Auto Space function will not operate.
- The Auto Space function will work during normal playback as well as programmed playback.
- Although 4-second blanks are inserted between tracks, this additional time is not reflected by the indication on the time remaining display or time display when the Auto Edit function is engaged.

⑰ Play Button (▶ PLAY)
- Refer to ⑨ Play Button.

⑱ Pause Button (⏸ PAUSE)
- Refer to ⑪ Pause Button.

⑲ Stop Button (■ STOP)
- Refer to ⑩ Stop Button.

⑳ Manual Search Reverse Button (◀◀)
- Press this button during playback for fast reverse search. As long as the button is kept pressed, music signals are played back faster than normal.
- Pressing this button when the pause mode is engaged, you can quickly reverse the pickup to a desired position, three times faster compared to manual reverse search during playback. During this time, no sound is heard.

㉑ Manual Search Forward Button (▶▶)
- Press this button during playback for fast forward search. As long as the button is kept pressed, music signals are played back faster than normal.
- Pressing this button when the pause mode is engaged, you can quickly forward the pickup to a desired position, three times faster compared to manual forward search during playback. During this time, no sound is heard.

㉒ Checking Programmed Contents Button (CALL)
- By pressing this button on the remote control unit, programmed contents will be displayed. Tracks entered into the memory, will be displayed starting from the first track entered, and will advance one step at a time each time this button is pressed.

㉓ Program Button (PROG)
- Press this button when you want to enter tracks for programmed playback. (Refer to page 8, 9 for details.)

㉔ Direct Button (DIRECT)
- Press this button when you want to cancel programmed playback.

㉕ Number Buttons (1, 2, 3, 4, 5, 6, 7, 8, 9 and 10)
- Use these buttons for the direct search and program memory functions.
  For direct search, press for example button [3] if you want to hear track number 3. For track number 12, press [+10] then [2]. To program tracks, press the PROG button ㉓ to set to the program mode.

㉖ +10 Button (+10)
- Press this button first when selecting track numbers over 10.
  Use it together with the number buttons ㉕. For example, to select track number 15, press [+10] then [5].
  For track number 33, press [+10] three times, then press [3].

㉗ Dimmer Button (DISPLAY)
- Press this button to change the brightness of the display.
- Press once to make the display 2/3 as bright as normal.
- Press again to make the display 1/3 as bright.
- Press once again to turn the entire display off during playback and all but the track number off in any other mode.

㉘ Time Mode Button (TIME)
- This button is used to select the desired indication on the TIME display. The indication on this display will change each time the button is pressed.
  Normally, the elapsed playback time of the current track is displayed.
  Pressing the button once, [SINGLE] is displayed and the remaining time of the current track is displayed.
  Pressing once more, [TOTAL] is displayed, and total playing time of remaining tracks is displayed. However, when programmed play is in progress, the total remaining time of the program is displayed.
  Press the button once again to return to the normal display of the elapsed playback time of the current track.

㉙ Volume Up Button (▲)
- The level of the Output Terminals output can be varied. Pressing this button increases the volume.

㉚ Volume Down Button (▼)
- The level of the Output Terminals output can be varied. Pressing this button decreases the volume.

㉛ Repeat All Button (ALL)
- Press this button to repeat playback of all tracks.
- When this button is pressed, [REPEAT] lights on the display and all tracks on the disc or in a program will be repeatedly played back. Press this button once more to disengage the Repeat All function.

㉜ A-B Repeat Button (A-B)
Repeating playback of a desired interval
1. Start playback and press the A-B button when you reach the starting point of the interval. The [A-B] indicator starts blinking.
2. Continue playback or advance the pickup using the Automatic search Forward button (⏭) or Manual search Forward button (▶▶) until the ending point is reached. Then press the A-B button once more. The [A-B] indicator will light.
- The pickup will now return to the starting point and repeat playback of the selected interval.
- This interval will be repeated until the A-B repeat mode is cancelled by pressing the A-B repeat button. The [A-B] indicator goes out.
- A-B repeat playback is not possible during programmed playback.

㉝ Automatic Search Forward Button (⏭)
- Refer to ⑬ Automatic Search Forward Button.

㉞ Automatic Search Reverse Button (⏮)
- Refer to ⑫ Automatic Search Reverse Button.

㉟ Output Terminal (LINE OUT)
- Connect these jacks to the input jacks on your amplifier. (Refer to page 7 for details on the connections.)

㊱ Digital Output Jack (OPTICAL)
- This jack outputs digital data.
- We recommended using an optical link cable (available in stores) for connections.

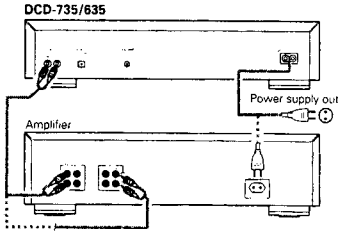
㊲ SYNCHRO Jack
- To make a synchronized recording, this jack must be connected to the SYNCHRO jack of the deck with a connection cord. (See Page 7 for connections.)

㊳ AC INLET
- Connect the included AC cord here.

Continuous Button Operation
If the automatic search reverse button ⑫ (㉞), the automatic search forward button ⑬ (㉝) or the +10 button ㉖ are held in, the function of that button will be repeated.

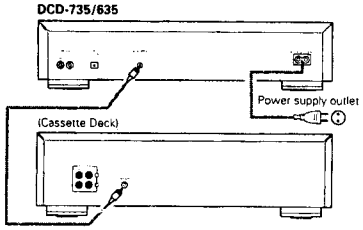
CONNECTION

(1) Connecting the Output Terminal (LINE OUT)
Use the included pin cords to connect the left (L) and right (R) output terminal (LINE OUT) of the DCD-735/635 to the CD, AUX, or TAPE PLAY left (L) and right (R) input jacks of the amplifier.

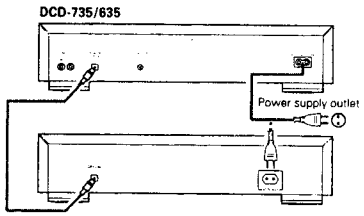


Connection Precautions
- Before proceeding with connections or disconnections of cables and power cords, be sure to turn all system components off.
- Ensure that all cables are connected properly to the L (left) and R (right) jacks.
- Insert plugs fully into the terminals.
- Connect the output jacks to the amplifier CD, AUX or TAPE PLAY input jacks.

(2) SYNCHRO Jack Connections
Connect the SYNCHRO jack with a DENON cassette deck which is equipped with a SYNCHRO jack, then make a synchronized recording. Use the connection cord supplied with the cassette deck.
To make use of this function, also connect the output jacks and make the settings so that a recording can be made from the CD player to the cassette deck.



(3) Connecting the Digital Output Jack (OPTICAL)
Use an optical link cable to connect the digital output jack (OPTICAL) of the DCD-735/635 to the digital input jack (OPTICAL) on a digital processor or D/A converter unit, available in stores.



Digital processor or D/A converter unit (Amprifier)

OPENING AND CLOSING THE DISC HOLDER AND LOADING A DISC

Opening and closing the disc holder (This operation only works while the power is on.)
1 Press the power switch (POWER) to turn on the power.
2 Press the open/close button (⏏ OPEN/CLOSE)

How to load a disc
- Make sure the disc holder is completely opened.
- Hold the disc by the edges and place it on the disc tray. (Do not touch the signal surface, i.e., the glossy side.)
- When using 12 cm. diameter discs, make sure the outer edge matches the tray guide circumference (Fig. 1), and when using CD singles (8 cm. diameter) match the outer edge with the inner tray guide circumference. (Fig. 2)
- Press the open/close button (⏏ OPEN/CLOSE) to close the disc holder.
- When the disc holder is closed, the disc is read and after a few seconds the number of tracks and total playing time are displayed on the TRACK NO. and TIME displays, respectively.
- When the disc holder is open and a disc is loaded, you may also press the play (▶ PLAY) or pause (⏸ PAUSE) button to close the disc holder. (If the play button (▶ PLAY) is pressed, playback will start immediately upon the disc contents having been read.)

Fig. 1

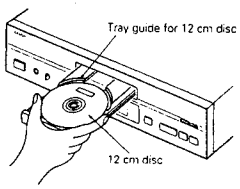
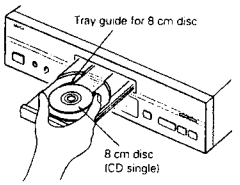


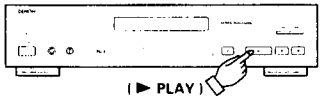
Fig. 2



Caution:
- If your finger should get caught in the disc holder when it closes, press the open/close button (⏏ OPEN/CLOSE).
- Do not place any foreign objects on the disc tray, and do not place more than one disc on the tray at a time. Otherwise malfunction may occur.
- Do not push in the disc tray manually when the power is off as this may cause malfunction and damage the CD player.

NORMAL CD PLAYBACK

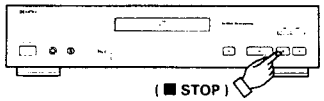
(1) Starting Playback



1 Press the power switch (POWER) to turn on the power.
2 Load the disc you want to play.
- When the disc holder is closed, the disc is read and the number of tracks and total playing time of the disc are displayed.

3 Press the play button (▶ PLAY).

(2) Stopping Playback



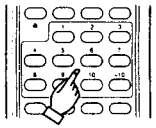
1 Press the stop button (■ STOP).
- When all tracks have been played on a disc, playback will stop by itself.

Precautions:
- If no disc has been loaded or the disc has been placed upside down, all indicators will light.
- When the information on the disc cannot be read correctly, for example due to dust or dirt on the disc, the indicators will read as shown below. Nothing will be shown on the TRACK NO. and TIME displays, and it may take quite a while to read the disc.

Normal display | Improper display

ADVANCED CD PLAYBACK

(1) Playing a Specific Track ..... Direct Search

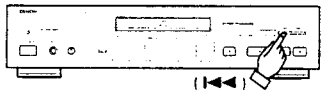


- Use the number buttons and the +10 button to input the number of the desired track.
  For example, to play track number 4, press [4], and to play track number 12, press [+10] and [2]. Playback will begin from that track.

(2) Advancing to the next track during playback ..... Automatic Search

Press the Automatic search forward button (▶▶|) during playback.
- The pickup will advance to the beginning of the next track and playback will continue. Pressing the button several times will forward the pickup the corresponding number tracks.

(3) Returning to the beginning of the current track during playback ..... Automatic Search

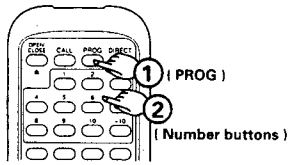


Press the Automatic search reverse button (|◀◀) during playback.
- The pickup will return to the beginning of the current track and playback will continue. Pressing the button several times will return the pickup the corresponding number tracks.

(4) Playing Specific Tracks in a Specific Order ..... Programmed Play

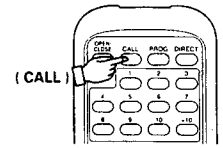
- With this function, you can choose any of the tracks on the disc and program them to play in any order.
- Programming is possible with the disc holder open.
- Up to 20 tracks can be programmed.
- The programmed tracks are shown on the calendar.

(1) Programming



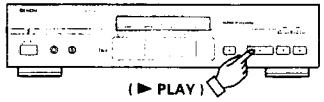
- Press the PROG button so that the [PROG] indicator lights, then use the number buttons and the +10 button to program the tracks.
  For example, to program tracks 3, 12, and 7, press [PROG], [3], [+10], [2] and [7].
  The corresponding track number lights on the calendar each time a track is programmed, the track number is displayed on the TRACK NO. display, and the total playing time of the programmed tracks is displayed on the TIME display. A few seconds after the last track has been programmed, the total number of tracks programmed is displayed on the TRACK NO. display and the total playing time of the programmed tracks is displayed on the TIME display.

(2) Checking the Programmed Tracks



- Press the CALL button.
  The programmed tracks are displayed in order on the TRACK NO. display each time the CALL button is pressed.

(3) Playing the Programmed Tracks



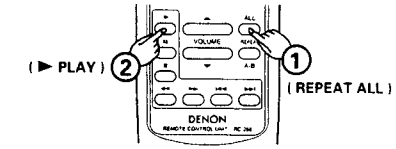
- Press the (▶ PLAY) button to play the tracks in the programmed order.

(4) Clearing the Program

- The entire program is cleared when the PROG button is pressed again. The program is also cleared when the (⏏ OPEN/ CLOSE) button is pressed.
- If the PROG button is pressed during programmed play, the program is cleared and playback continues normally through to the last track on the disc.

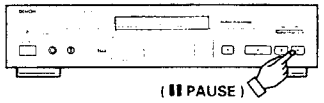
NOTES
- If programming is done in the play or pause mode, the track currently playing is programmed at the first position. Other tracks can be added to the program, but the number of programmed tracks and the playing time will not be displayed.
- Direct search is not possible during programmed play. If the number buttons are pressed, that track is added to the end of the program.
- Programming is possible with the disc holder open. Track numbers greater than the number of tracks recorded on the disc can be programmed, but will be automatically cleared before playback begins.
- The remaining time per track will only be displayed for track numbers 1 through 20.
- The total program time and remaining program time are not displayed if tracks greater than track number 20 are programmed.

(5) Repeating playback ..... Repeat



① Press the repeat button (REPEAT ALL).
② Press the play button (▶ PLAY).
- Pressing the repeat all tracks button (REPEAT ALL), [REPEAT] is displayed.
- Steps ① and ② above may be reversed.
- To cancel repeat playback of all tracks, press the repeat button (REPEAT ALL) once more.
- Pressing the repeat button (REPEAT ALL) during programmed playback, playback of the tracks entered into the memory will be repeated.

(6) Pausing playback at any point ..... Pause



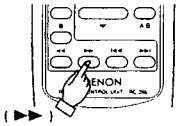
- Playback can be temporarily halted and then continued from the same point in the track.

1 Press the pause button (II PAUSE) during playback.
2 To continue playback, press the play button (▶ PLAY) or the pause button (II PAUSE) once more.

(7) Audible quick search ..... Manual Search

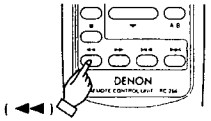
- Using this function, you can cue to a desired point within a track, either in the forward or reverse direction.
- Release the manual search button (◀◀ or ▶▶) when the desired point has been reached. Normal playback then continues.

(1) Manual Search Forward



1 Press the manual search forward button (▶▶) during playback. Playback of the track is sped up.
- As a reference, the current track number and elapsed playback time within the track are displayed.
- Manual search forward is approximately three times faster when engaged during the pause state compared to playback. In this case, no sound is heard however.
- If the manual search forward button (▶▶) is kept pressed after the end of the final track on the disc is reached, (JJ) is displayed and manual search stops. To return to another point, press the manual search reverse button (◀◀) until (JJ) disappears.

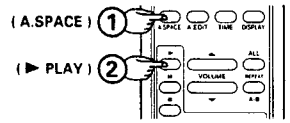
(2) Manual Search in Reverse



1 Press the manual search reverse button (◀◀) during playback. Reverse playback of the track is sped up.
- As a reference, the current track number and elapsed playback time within the track are displayed.
- Manual search in reverse is approximately three times faster when engaged during the pause state compared to playback. In this case, no sound is heard however.
- If the manual search reverse button (◀◀) is kept pressed after the beginning of the first track on the disc is reached, (CC) is displayed and manual search stops. To return to another point, press the manual search forward button (▶▶) until (CC) disappears.

(8) Inserting blanks between tracks ..... Auto Space

- This is convenient feature that will insert 4-second blanks between tracks, which can be used when recording compact discs on tape

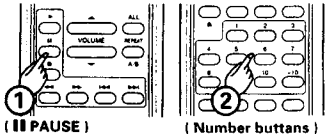


1. Pressing the auto space button (A. SPACE) will cause the A. SPACE indicator to light
2. Press the play button (▶ PLAY) to start playback
   When a track has been played to its end, a 4-second silence is made before the next track starts playing.
3. Press the auto space button (A. SPACE) again to cancel the function.

(9) Searching and Pausing at the Beginning of the Track ..... Pause

① With Direct Search

- In this case, the set pauses at the beginning of the track found with the direct search operation



1. Press the (II PAUSE) button.
2. Press the number button(s) for the desired track
- To start playback, press the (▶ PLAY) or (II PAUSE) button.

② With Program Search

- Press the (II PAUSE) button after the program search operation is completed. The set will pause at the beginning of the first programmed track

(10) Synchronized Recording Function ..... Synchronized Recording Function

Connecting the SYNCHRO jack with a DENON cassette deck which is equipped with a SYNCHRO jack will allow synchronized recordings to be made.

- To use this function, be sure to connect the SYNCHRO jacks as well as the output jacks. (See Page 7 for connections.) Then, load a disc
- With the CD player in the stop or pause condition, starting a synchronized recording at the cassette deck side will automatically cause the CD player to start playing. (This is synchronized play.)
- The remote control signal receive indicator of the display will blink during synchronized play.

NOTE

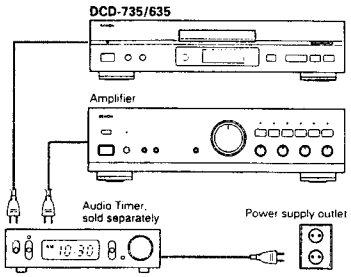
- Synchronized play is also possible in the program mode.
- The repeat mode is cancelled when synchronized play is started.
- Except for the STOP, PLAY, TIME, A.SPACE and DISPLAY buttons, the buttons will not operate during synchronized play.
- To use this function in the AUTO EDIT condition, use the longer tape than total playing time of the disc.
- To use this function with AUTO EDIT function. Be sure to complete the setting of AUTO EDIT function with PAUSE indication on the Display. Then start the synchronized recording function.
- In the play condition, even if you start a synchronized recording at the cassette deck side, CD player will not synchronize with the cassette deck and the cassette deck becomes synchronized pause condition.
  In this case push the STOP button of the cassette deck, set the CD player in the stop or pause condition and start a synchronized recording at the cassette deck side again.
- For further details, see the owner's manual for the cassette deck that has been connected

TIMER-CONTROLLED PLAYBACK

■ Operation

1. Turn on the power of all system components.
2. Set the input selector on the amplifier to correspond to the inputs the CD player is connected to.
3. Make sure a disc has been loaded in the disc holder.
4. Check the time on the timer and then set the desired turn-on time.
5. Turn the audio timer ON.
   Power is turned off automatically in all components connected to the timer.
6. When the preset turn-on time is reached, power is turned on in the system components, and CD playback starts from the first track.

■ Connection



THE COMPACT DISC

1. Precautions on handling compact discs

- Do not allow fingerprints, oil or dust on the surface of the compact disc. If the signal surface is dirty, wipe it off with a soft, dry cloth. Wipe in circular motions from the center and out.
- Do not use water, benzene, thinner, record sprays, electrostatic proof chemicals, or silicone-treated cloth to clean discs.
- Always use care when handling discs to prevent damaging the surface, in particular when removing a disc from the case and returning it.
- Do not bend compact discs.
- Do not apply heat to compact discs.
- Do not enlarge the hole in the center of the disc.
- Do not write on the disc and do not attach any labels.
- Condensation will form on the disc surface if it is brought into a warm room from a cold area, such as outdoors during winter. Wait until the condensation disappears. Never dry discs with hair dryers, etc.

2. Precautions on storage

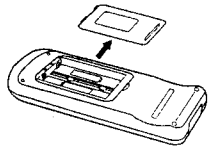
- After playing a disc, always return it to its case.
- Keep discs in the cases when they are not to be played.
  This will protect them from dust and dirt and prolong their service life.
- Do not store discs in the following places:
  1) Places exposed to direct sunlight for a considerable time.
  2) Places subject to accumulation of dust or high humidity.
  3) Places exposed to high temperatures, such as close to heater outlets.

PLAYBACK USING THE REMOTE CONTROL UNIT

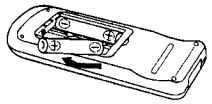
The accessory RC-266 remote control unit can be used to control the CD player from a convenient distance.

(1) Inserting the dry cell batteries

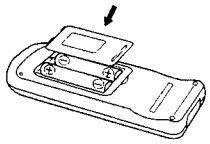
1. Remove the battery cover on the back of the remote control unit.



2. Insert two R6P (standard size AA) dry cell batteries with correct polarity as indicated inside the battery compartment.



3. Replace the battery cover.

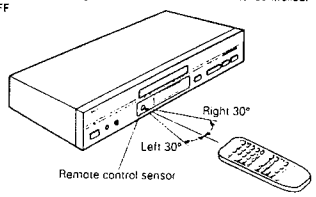


Notes on the Batteries

- The remote control unit uses standard size AA dry cell batteries.
- The batteries will need to be replaced approximately once a year. Replacement may be necessary earlier depending on how much the remote control unit is used.
- If, in less than a year from the time new batteries were inserted, the remote control fails to operate the CD player from a near-by position, it is time to replace the batteries.
- Insert the batteries properly, following the polarity diagram inside the battery compartment, in other words make sure (+) and (−) terminals are properly aligned.
- Batteries are prone to damage and leakage.
  Therefore:
  - Do not combine new batteries with used ones.
  - Do not combine different types of batteries.
  - Do not jumper opposite poles of the batteries, expose them to heat, break them open nor expose of them in open fire.
- If the remote control unit is not to be used for a long period of time, remove the batteries from the unit.
- If the batteries have leaked, remove any traces of battery fluid from the battery compartment, wiping thoroughly with a dry cloth. Then insert new batteries.

(2) Directions for Use

- Operate the remote control unit while pointing it towards the remote control sensor on the CD player (see below).
  When a remote control signal is received, the remote control indicator on front of the CD player lights briefly.
- The remote control unit can be used at a distance up to 8 meters in a straight line from the CD player. This distance decreases if there are obstructions blocking the signal path or when the remote control unit is operated at an angle from the remote control sensor.
- The buttons on the remote control unit have identical functions with those on the CD player.
  However, the following functions cannot be remote controlled: Power ON/OFF.



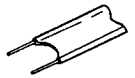
Notes on Operation

- Do not press identical buttons on the CD player and remote control unit simultaneously as this may cause malfunction.
- The remote control unit may be difficult to operate if the remote control sensor is exposed to strong light, such as direct sunlight or light from fluorescent lamps, or if there are obstacles between the remote control unit and the sensor.
- **Direct track selection**
  Using the track number buttons (1 ~ 10, + 10), tracks can be directly assigned for playback.
- **Track selection while programming**
  Press the program button (PROG) and then the track numbers you wish to enter into the memory.
  Example: PROG → 3 → + 10 & 1 → 5
  (Tracks 3, 11, 5 and so on are entered into the memory.)
  Memorized tracks are erased by pressing the Direct button (DIRECT).
- **Correct use of the track number buttons**
  Direct selection of single-digit tracks is easy by just pressing the desired track number button. For tracks with numbers from 11 and on, first press the + 10 button and then a single-digit button. E.g., to select track 22, press the + 10 button twice and then press the 2 button.

INSTALLATION PRECAUTIONS

The CD player uses a microcomputer for controlling internal electronic circuits. In the event that the player is used while a near-by tuner or TV is turned on, although unlikely, interference could occur either in the sound from the tuner or the picture of the TV. To avoid this, please take the following precautions

- Keep the CD player as far away from the tuner or TV set as possible
- Keep the power cable and connecting cable of the CD player separate from the antenna wires of the tuner and TV
- Interference is particular likely to occur when an indoor antenna or a 300 Ω/ohm feeder cable is used. Thus, use of an outdoor antenna and 75 Ω/ohm coaxial cable is strongly recommended.



300 Ω/ohm feeder cable

75 Ω/ohm coaxial cable

TROUBLESHOOTING

If the CD player does not seem to be functioning properly, check the following:

Disc holder does not open or close.
- Is the power on?

When a disc is loaded, 00 00 00 is displayed.
- Is the disc loaded properly? . . . . . See page 7

When the play button (▶ PLAY) is pressed, playback does not start.
- Is the disc dirty or scratched? . . . . . See page 11

There is no sound, or it is distorted.
- Is the output cord properly connected to the amplifier? . . . . . See page 7
- Have the amplifier controls been set correctly?

A specific section of the disc will not play.
- Is the disc dirty or scratched? . . . . . See page 11

Programmed playback does not work.
- Have programming been properly done? . . . . . See pages 8 and 9

Incorrect operation when buttons on the remote control are pressed.
- Is the remote control unit being operated too far from the CD player? . . . . . See page 11
- Are there obstacles blocking the ray?
- Is the remote control sensor exposed to strong light?
- Are the batteries exhausted?

SPECIFICATIONS

	DCD-735	DCD-635
AUDIO		
No. of Channels:	2 channels	
Frequency Response:	2 ~ 20,000 Hz	
Dynamic Range:	100 dB	98 dB
Signal-to-noise Ratio:	110 dB	107 dB
Harmonic Distortion:	0.0025% (1 kHz)	0.003% (1 kHz)
Separation:	103 dB (1 kHz)	100 dB (1 kHz)
Wow & Flutter:	Below measurable limit (±0.001% W peak)	
Output Voltage:	0.2 ~ 2.0 V	
DISCS	Compact Disc format	
GENERAL CHARACTERISTICS		
Power Supply:	50 Hz ~ 230 V	
Power Consumption:	10 W	
Dimensions:	434 (17-3/32") W × 100 (3-59/64") H × 283 (11-5/32") D mm	
Weight:	4.1 kg	

FUNCTIONS AND DISPLAY	
Functions:	Automatic search, programmed playback, repeat playback, manual search, auto space, time mode, auto edit, dimmer
Display:	Track number, time, music calendar, emphasis feature and engaged modes
Others:	Headphones jack
REMOTE CONTROL UNIT	RC-266
Remote Control System:	Infrared pulse system
Power Supply:	3 V DC; two R6P (standard size AA) dry cell batteries
External Dimensions:	54.5 (2-1/8") W × 140 (5-1/2") H × 24.8 (31/32") D mm
Weight:	85 g (including batteries)

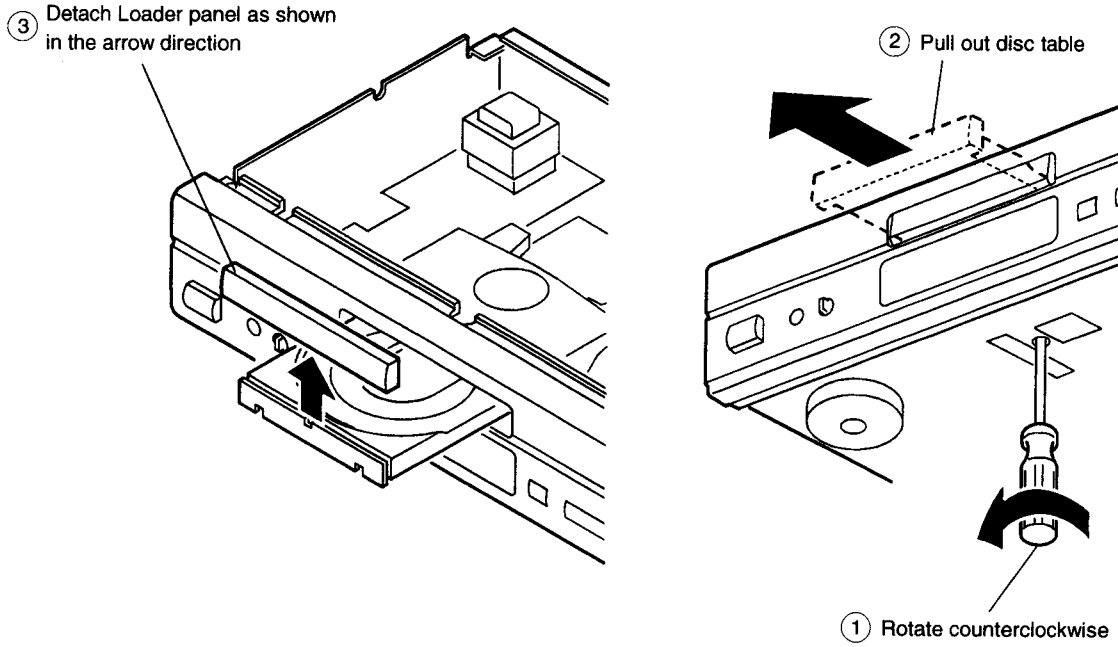
* Design and specifications are subject to change without notice in the course of product improvement

DISASSEMBLY

(To reassemble reverse disassembly)

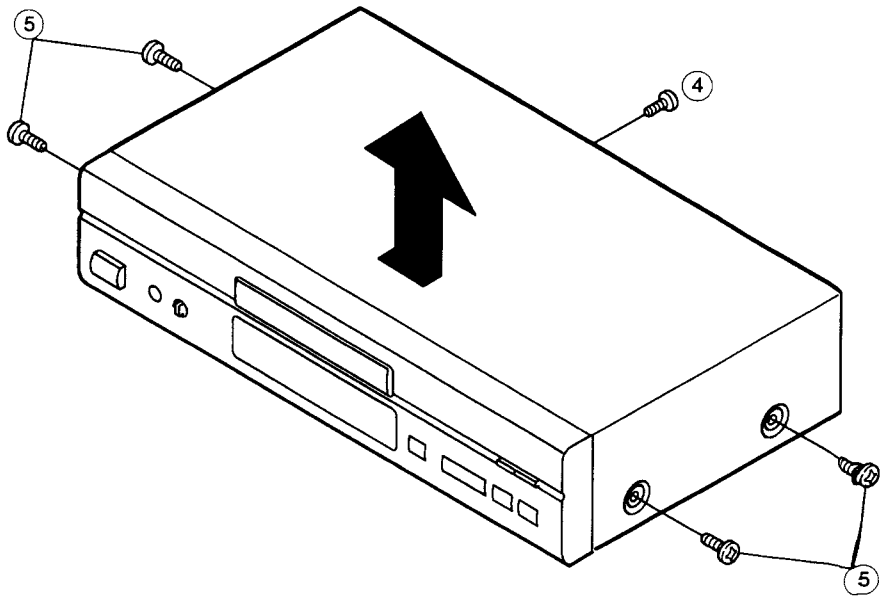
1. LOADER PANEL

As removing loader panel in power OFF status, use a screw driver to insert the hole of set bottom side and rotate counterclockwise (1), pull out disc table (2), then detach Loader panel (3).



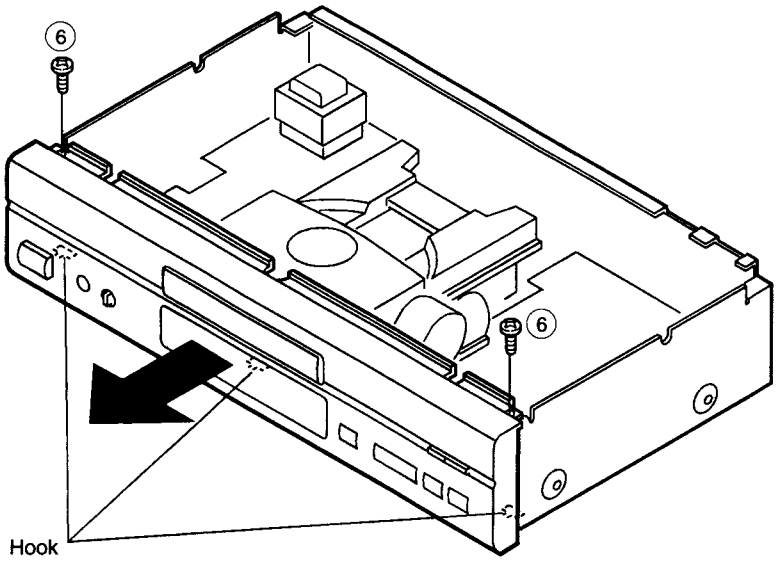
2. TOP COVER

1. Remove a Screw (4).
2. Remove 4 screws (5).



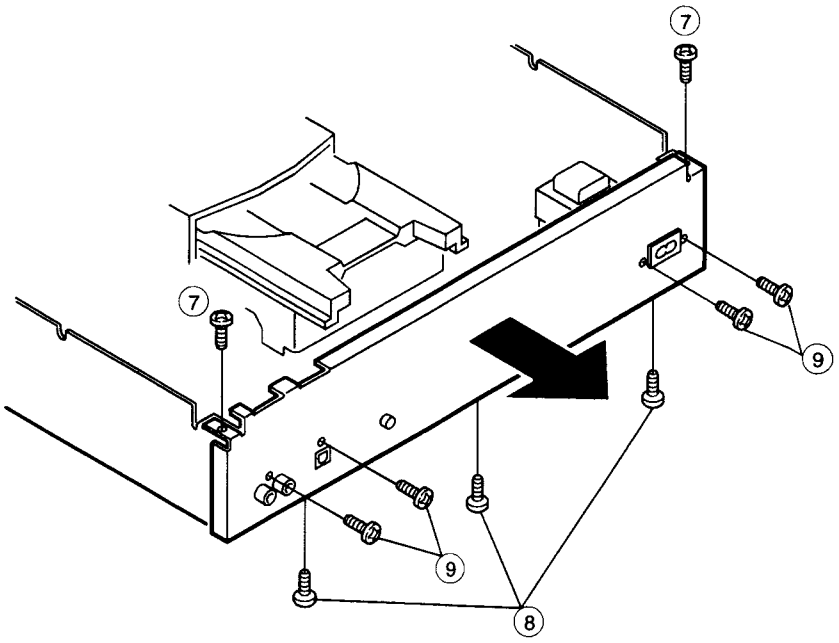
3. FRONT PANEL

1. Remove 2 screws (6) .
2. Undo the hooks at 3 places.



4. REAR PANEL

1. Remove 2 screws (7) .
2. Remove 3 screws (8) .
3. Remove 4 screws (9) .



CONFIRMING METHOD OF SERVO

A microcomputer adopted to this unit has the service programs so as to perform confirming more easily with the operation buttons. Digital servo adopted to this unit becomes automatic adjustment status in focus gain and tracking gain.

1. Actuating the Service Program

(1) Turn power switch OFF.

(2) Shortcircuit the main unit JV125 (OUT) to JV124 (IN).

(3) Turn power switch ON.
(Service program start actuates and displays track No. 01)

Note: The operation buttons do not function when service program actuates.

2. Operation Function at Service Program Actuation

Button Operation	Operation Function	Explanation
▲ OPEN/CLOSE	Opens or closes disc holder button.	● Opens or closes only when disc is stoped. ● Operate other keys after open or close.
■ STOP	Stops system function.	● Displays track number 01. ● Press when adjustment completed or do it again.
II PAUSE	(1) Starts Focus servo and disc turns.	● Press when tracking adjustment. ● When completed, displays track number 02.
	(2) Starts Focus servo, Tracking servo, Slide servo and Spindle servo.	● Pressing PAUSE button, starts Tracking servo and slide servo. ● When completed, displays track number 03.
	(3) Displays a result of Focus gain automatic adjustment.	● After completed PAUSE operation, pressing PAUSE again indicates a result of Focus gain automatic adjustment. ● When completed, display shows: TRACK 1- TIME 88:88 TIME display shows automatic adjustment value. Displays: 0 dB27.5~00dB 0.5 or EE0105
	(4) Displays a result of Tracking gain automatic adjustment.	● After completed PAUSE operation, pressing PAUSE again indicates a result of Tracking gain automatic adjustment. ● When completed, display shows: TRACK 2- TIME 88:88 TIME display shows automatic adjustment value. Displays: 0 dB27.5~00dB 0.5 or EE0205
	(5) Displays a result of Focus BIAS automatic adjustment.	● After completed PAUSE operation, pressing PAUSE again indicates a result of Focus BIAS automatic adjustment. ● When completed, display shows: TRACK 3- TIME 88:88 TIME display shows automatic adjustment value. Displays: -03 0.5~+03 0.5 or EE0305
	(6) Displays a result of EF BALANCE automatic adjustment.	● After completed PAUSE operation, pressing PAUSE again indicates a result of EF BALANCE automatic adjustment. ● When completed, display shows: TRACK 4- TIME 88:88 TIME display shows automatic adjustment value. Displays: -25S5~+25S5 or EE0405
Other Buttons	Unable to obtain normal function.	● Never attempt to operate the buttons other than the above. ● If the buttons are erroneously pressed, promptly turn OFF the power switch.

(Caution)

- During the service program is in operation, do not use remote control.

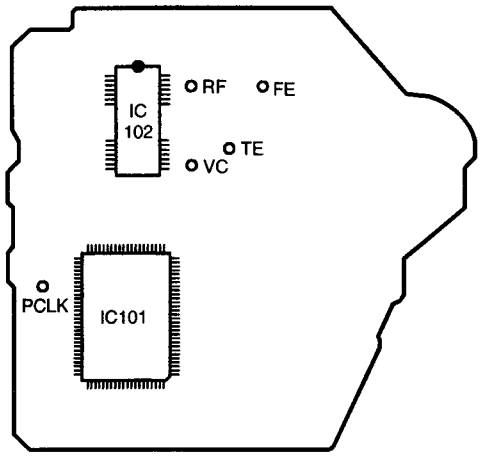
3. Confirming Method

(1) Required Measuring Equipment

1) Dual-trace oscilloscope
2) Test disc: CA-1094

(2) Check Point

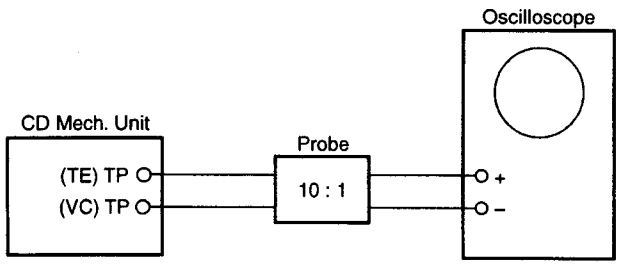
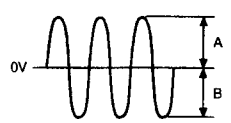
CD Mechanical unit PWB (pattern view)



(3) Confirming Procedure

1) Actuate the service program.
2) Check for Tracking offset.
3) Check the value of Focus gain automatic adjustment.
4) Check the value of Tracking gain automatic adjustment.
5) Check for Focus BIAS.
6) Check for EF BALANCE.
7) Finish the service program and return the mode to normal operation (turn ON the power switch in normal manner).
8) Check for HF level.

(4) Confirming Tracking Offset

<table>
<tr><th colspan="3">Connection</th></tr>
<tr><td colspan="3"> 
</td></tr>
<tr><th colspan="2">Osciloscope</th><th>Check</th><th>Step</th></tr>
<tr><td>V</td><td>H</td><td>(Osciloscope)</td><td rowspan="2">1. Push [▲OPEN/CLOSE] button and load disc holder reference disk.
2. Push [▲OPEN/CLOSE] button and close disc holder.
3. Push [II PAUSE] button to turn disc. (Displays track number 02)
4. Short (+) (–) of osciloscope and check the base line.
5. Confirm that upper and lower amplitude of the waveform is symmetric against 0V.</td></tr>
<tr><td>0.1v/div</td><td>1 ~ 2
ms/div</td><td> 

$\frac{A-B}{A+B} < 30\%$</td></tr>
</table>

(5) Confirming Focus Gain

1) Press [II PAUSE] button twice. (Track No. indication 03)
2) Press [II PAUSE] button. (Track No. indication 1-)
3) Check for automatic adjustment value.
   Automatic adjustment value: 00M82S ~ 00M34S (normal temperature) (Test disc: CA-1094)
   01M04S ~ 00M28S (0°C~40°C)

Note: As it is a possibility of abnormality in pick-up when automatic adjustment value is EEM01S or less than 00M27S, execute the confirmation for pick-up according to pick-up replacement standard.
If there is no abnormality in pick-up as described in pick-up replacement standard notes, no problem will occur for disc playback even though the automatic adjustment value is EEM01S or less than 00M27S.

(6) Confirming Tracking Gain

1) Press [II PAUSE] button twice. (Track No. indication 03)
2) Press [II PAUSE] button twice. (Track No. indication 2-)
3) Check for automatic adjustment value.
   Automatic adjustment value: 00M86S ~ 00M27S (normal temperature) (Test disc: CA-1094)
   01M07S ~ 00M22S (0°C~40°C)

Note: As it is a possibility of abnormality in pick-up when automatic adjustment value is EEM02S or less than 00M22S, execute the confirmation for pick-up according to pick-up replacement standard.
If there is no abnormality in pick-up as described in pick-up replacement standard notes, no problem will occur for disc playback even though the automatic adjustment value is EEM02S or less than 00M22S.

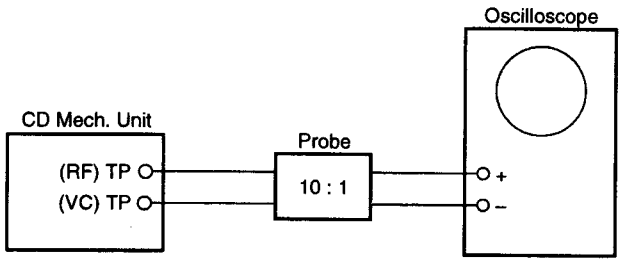
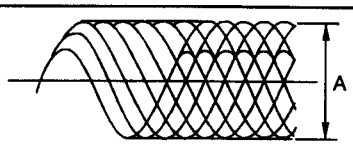
(7) Confirming Focus BIAS

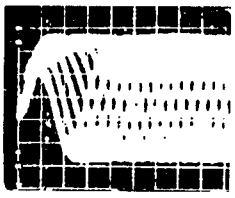
1) Press [II PAUSE] button twice. (Track No. indication 03)
2) Press [II PAUSE] button three times. (Track No. indication 3-)
3) Check for automatic adjustment value.
   Automatic adjustment value: 1M20S ~ -0M20S

(8) Confirming EF BALANCE

1) Press [II PAUSE] button twice. (Track No. indication 03)
2) Press [II PAUSE] button four times. (Track No. indication 4-)
3) Check for automatic adjustment value.
   Automatic adjustment value: 1M50S ~ -1M21S

(9) Confirming HF Level

<table>
<tr><th colspan="3">Connection</th></tr>
<tr><td colspan="3"> 
</td></tr>
<tr><th colspan="2">Osciloscope</th><th>Check</th><th>Step</th></tr>
<tr><td>V</td><td>H</td><td>(Osciloscope)</td><td rowspan="2">1. Push [II PAUSE] button twice. (Displays track number 03)
2. Check HF level of osciloscope.
3. Confirm that the waveform is in good shape. (eye pattern in center must be able to discriminate clearly.)</td></tr>
<tr><td>50mv/div
or
20mv/div</td><td>0.2μ/div
or
0.5μ/div</td><td> 

A=1.54~0.85V
  </td></tr>
<tr><td colspan="2">• Set input mode to ALTERNATE or CHOPPER.</td><td></td><td></td></tr>
</table>

TEST METHOD FOR HEAT RUN MODE

1. Actuate

While hold pushing ▶ , ■ and ⏸ buttons simultaneously, turn the unit power on. The remote control sensor indicator will light to show that the unit is shifted in Heat Run mode.
Press the ⏏ button to cancel Heat Run mode after loading disc.

2. Operation

1) Heat Run test

During the Heat Run mode to start in Play mode, it makes the unit replays from the first track after opens the loader when finishing with playing last track. After that, this operation is over again. When disc has over 21 tracks, makes the unit to search the last track and set operation times.

2) Checking test

Press [PAUSE] button 2 times in the Heat Run mode, it makes the unit opens the loader, turns the servo ON, reads out TOC, operates first track search and does over again.

3) Sound out test

During the Heat Run mode, press +10 button to start in Play mode. If it generates over ± 8 frame sound out, stop the operate and display the error message.

3. Error Message

When the system error occurs in the Heat Run mode, display the error message with TRACK and operated times with TIME.

1) E1 error	Focus Servo does not activate.
2) E2 error	GFS does not drive.
3) E3 eroor	No GFS emit.
4) E4 error	TOC is unreadable.
5) E5 error	Does not turn the Loader switch ON.
6) E6 error	Does not turn the Pick-up inner circle switch OFF.
7) E7 error	Does not turn the Pick-up inner circle switch ON.
8) E8 error	Sound out.

NOTE FOR HANDING OF THE LASER PICK UP

Judgement standards for PICK-UP Replacement

1. PICK-UP REPLACEMENT

The pick-up(PU) replacement must be executed upon the following 4 items and found the abnormality in the PU. When PU is abnormal, please write PU abnormality cause for PU sign column of connecting prompt report of market quality state clearly.

1) Judgement by confirming of Focus search
(cause of PU abnormality: Focus search does not function.)

2) Judgement by checking of changing PU due to Focus error signal V_{FE}
(cause of PU abnormality: No proper emission of focus error signal (s-curve) V_{FE})

3) Judgement by checking of changing PU due to Tracking Error signal V_{TE}
(cause of PU abnormality: No proper emission of tracking error signal (traverse waveform) V_{TE})

4) Judgement by checking of changing PU due to HF level V_{HF}
(cause of PU abnormality: No proper emission of HF waveform)

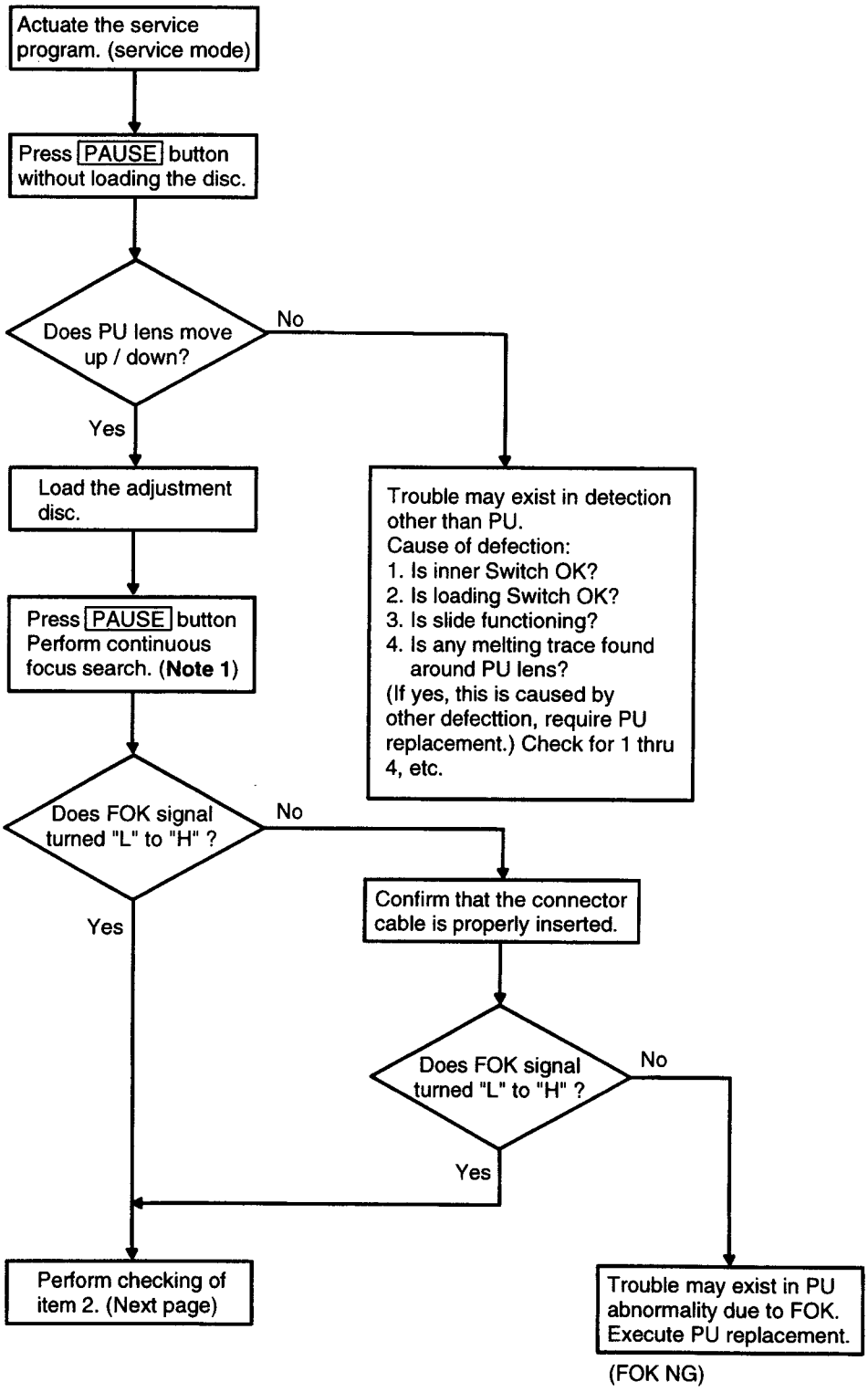
2. DISC TO BE USED FOR CONFIRMATION

Using disc: No. CA-1094

3. OTHER CAUSE OF PU CHANGING

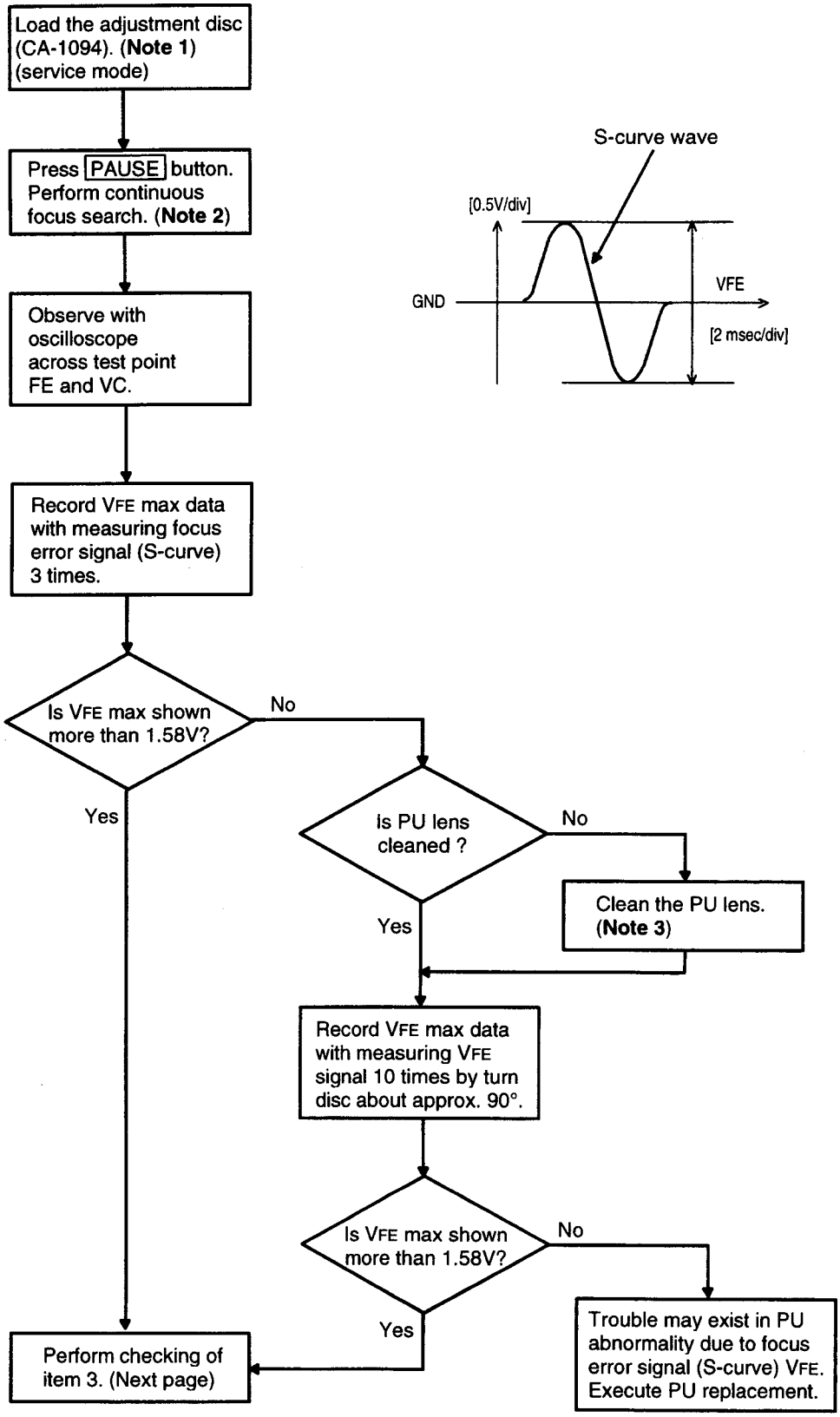
If it happened other cause of PU replacement except the above-mentioned 4 items, please execute PU replacement and write this cause for connecting prompt report of market quality state in detail.

1. Judgement by Confirming of Focus Search (Check for focus search function of PU Lens)


Actuate the service program. (service mode)
Press PAUSE button without loading the disc.
Does PU lens move up / down?
No
Yes
Load the adjustment disc.
Trouble may exist in detection other than PU.
Cause of defection:
1. Is inner Switch OK?
2. Is loading Switch OK?
3. Is slide functioning?
4. Is any melting trace found around PU lens?
(If yes, this is caused by other defecttion, require PU replacement.) Check for 1 thru 4, etc.
Press PAUSE button Perform continuous focus search. (Note 1)
Does FOK signal turned "L" to "H" ?
No
Yes
Confirm that the connector cable is properly inserted.
Does FOK signal turned "L" to "H" ?
No
Yes
Perform checking of item 2. (Next page)
Trouble may exist in PU abnormality due to FOK. Execute PU replacement.
(FOK NG)

Note 1: Press PAUSE button continually in FOK measuring.

2. Judgement by checking of changing PU due to Focus Error signal VFE (Check for proper S-surve)

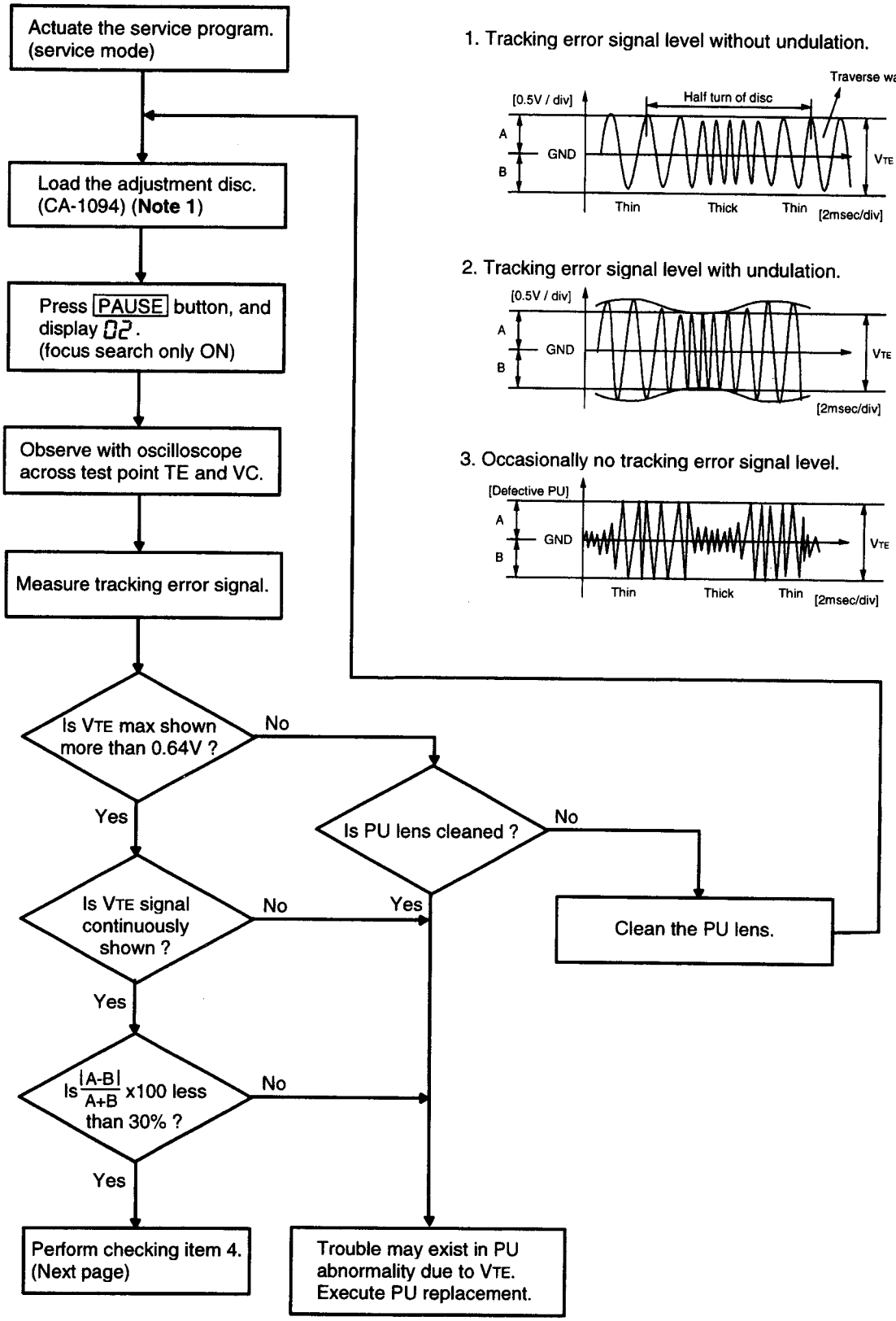

Load the adjustment disc (CA-1094). (Note 1) (service mode)
Press PAUSE button. Perform continuous focus search. (Note 2)
Observe with oscilloscope across test point FE and VC.
Record VFE max data with measuring focus error signal (S-curve) 3 times.
Is VFE max shown more than 1.58V?
No
Yes
Is PU lens cleaned ?
No
Yes
Clean the PU lens. (Note 3)
Record VFE max data with measuring VFE signal 10 times by turn disc about approx. 90°.
Is VFE max shown more than 1.58V?
No
Yes
Trouble may exist in PU abnormality due to focus error signal (S-curve) VFE. Execute PU replacement.
Perform checking of item 3. (Next page)

Note 1: Adjustment disc (CO-76143) VFE = 1.67 V

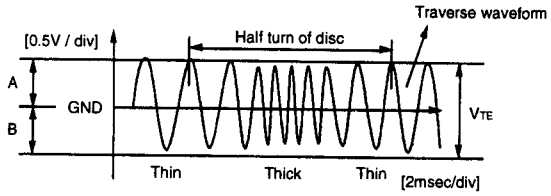
Note 2: Press PAUSE button continually in VFE measuring.

Note 3: Gently wipe out the lens surface with a little amount of is opropyl alcohol soaked lens cleaning paper without apply excessive force to the lens.

3. Judgement by checking of changing PU due to Tracking Error signal VTE (Check for proper Traverse waveform)


Actuate the service program. (service mode)
Load the adjustment disc. (CA-1094) (Note 1)
Press PAUSE button, and display 02. (focus search only ON)
Observe with oscilloscope across test point TE and VC.
Measure tracking error signal.
Is VTE max shown more than 0.64V ?
No
Yes
Is PU lens cleaned ?
No
Yes
Clean the PU lens.
Is VTE signal continuously shown ?
No
Yes
Yes
Is |A-B|/(A+B) x100 less than 30% ?
No
Yes
Perform checking item 4. (Next page)
Trouble may exist in PU abnormality due to VTE. Execute PU replacement.

1. Tracking error signal level without undulation.

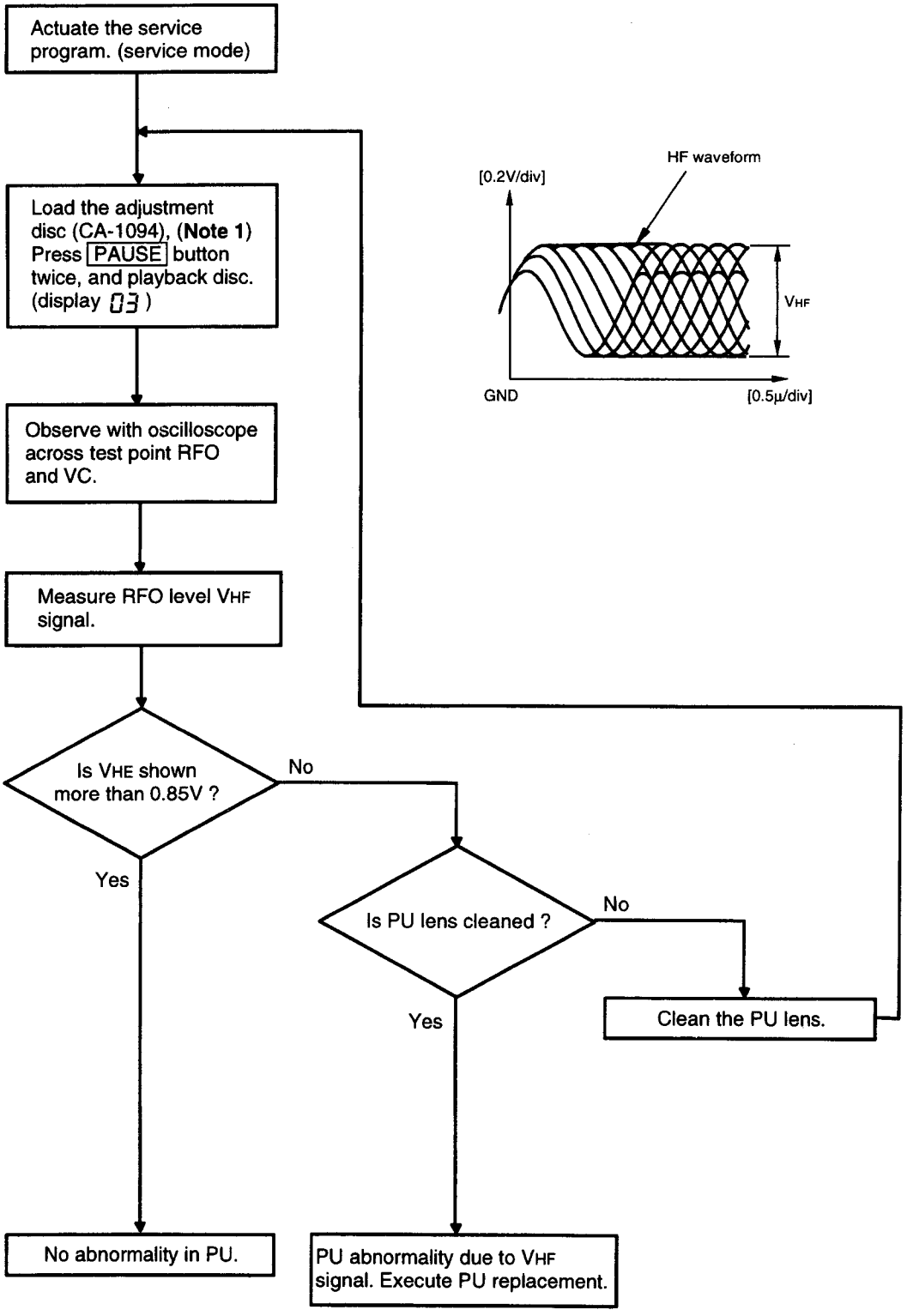


2. Tracking error signal level with undulation.

3. Occasionally no tracking error signal level.

Note 1: Adjustment disc (CO-76143) VTE = 0.70 V

4. Judgement by checking of changing PU due to HF level VHF (Check for proper HF waveform)

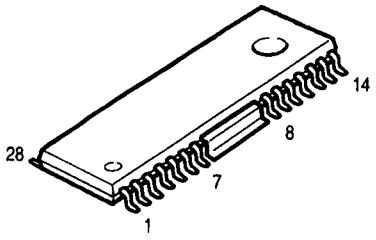

Actuate the service program. (service mode)
Load the adjustment disc (CA-1094), (Note 1) Press PAUSE button twice, and playback disc. (display 03)
Observe with oscilloscope across test point RFO and VC.
Measure RFO level VHF signal.
Is VHE shown more than 0.85V ?
No
Yes
Is PU lens cleaned ?
No
Yes
Clean the PU lens.
No abnormality in PU.
PU abnormality due to VHF signal. Execute PU replacement.
HF waveform
[0.2V/div]
VHF
GND
[0.5µ/div]

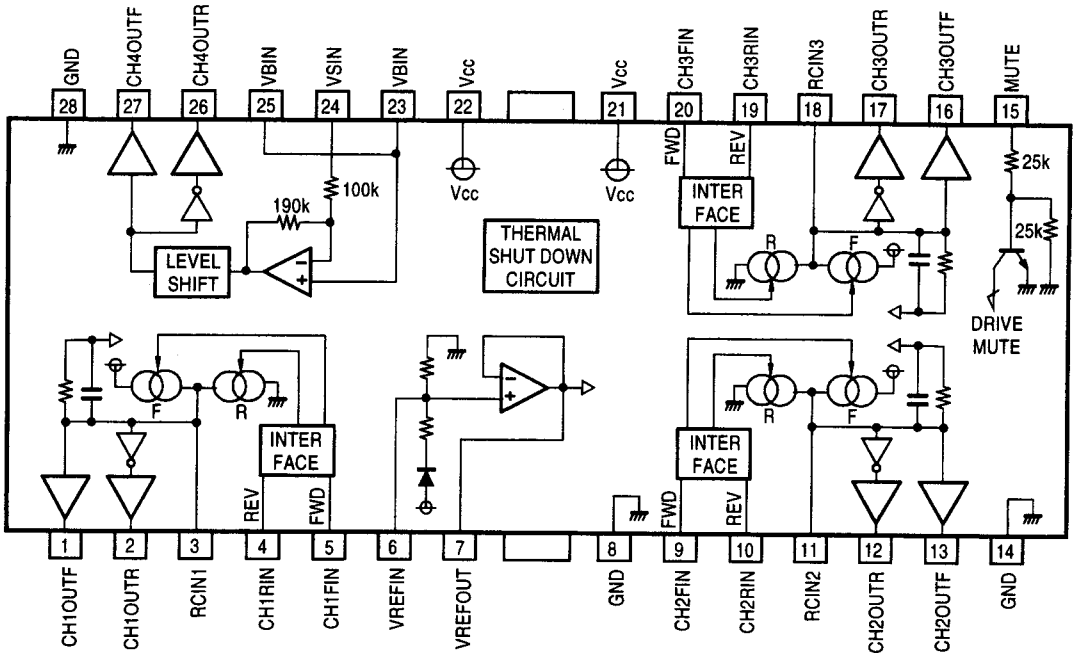
Note 1: Adjustment disc (CO-76143) VHE = 0.85 V.

SEMICONDUCTORS

● IC's

BA6392FP





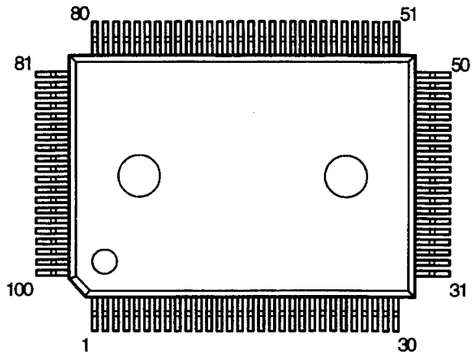
BA6392FP Terminal Function

Pin No.	Symbol	I/O	Function
1	CH1OUTF	O	CH1 output terminal (+).
2	CH1OUTR	O	CH1 output terminal (–).
3	RCIN1	O	CH1 Pre-Amplifier output terminal.
4	CH1RIN	I	CH1 Pre-Amplifier negative input terminal.
5	CH1FIN	I	CH1 Pre-Amplifier positive input terminal.
6	VREFIN	I	Internal Vref-Amplifier resistor bias terminal.
7	VREFOUT	O	Internal Vref-Amplifier output terminal.
8	GND	—	Vref-Amplifier and constant current ground.
9	CH2FIN	I	CH2 Pre-Amplifier positive input terminal.
10	CH2RIN	I	CH2 Pre-Amplifier negative input terminal.
11	RCIN2	O	CH2 Pre-Amplifier output terminal.
12	CH2OUTR	O	CH2 output terminal (–).
13	CH2OUTF	O	CH2 output terminal (+).
14	GND	—	CH2 and CH3 driver ground.

Pin No.	Symbol	I/O	Function
15	MUTE	I	Driver mute control terminal.
16	CH3OUTF	O	CH3 output terminal (+).
17	CH3OUTR	O	CH3 output terminal (–).
18	RCIN3	O	CH3 Pre-Amplifier output terminal.
19	CH3RIN	I	CH3 Pre-Amplifier negative input terminal.
20	CH3FIN	I	CH3 Pre-Amplifier positive input terminal.
21	Vcc	—	CH2 and CH3 driver power supply.
22	Vcc	—	CH1 and CH4 driver power supply.
23	VBIN	I	CH4 Pre-Amplifier positive input terminal.
24	VSIN	I	CH4 Pre-Amplifier negative input terminal.
25	VBIN	O	CH4 Pre-Amplifier output terminal.
26	CH4OUTR	O	CH4 output terminal (–).
27	CH4OUTF	O	CH4 output terminal (+).
28	GND	—	CH1 and CH4 driver ground.

Note: Each driver output polarity is reference to Pre-Amplifier output terminal polarity (+).

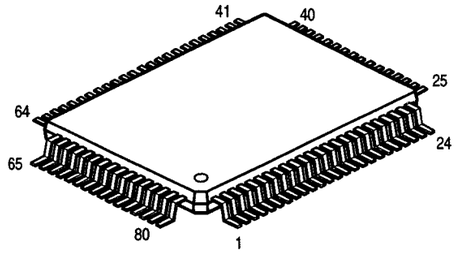
CXD2545Q

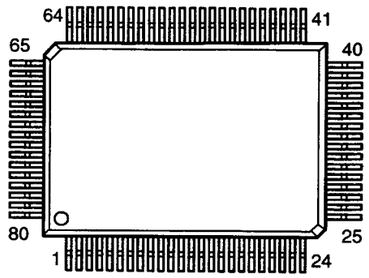


CXD2545Q Terminal Function

Pin No.	Symbol	I/O	Function
1	SRON	O	Sled drive output signal.
2	SRDR	O	Sled drive output signal.
3	SFON	O	Sled drive output signal.
4	TFDR	O	Tracking drive output signal.
5	TRON	O	Tracking drive output signal.
6	TRDR	O	Tracking drive output signal.
7	TFON	O	Tracking drive output signal.
8	FFDR	O	Focus drive output signal.
9	FRON	O	Focus drive output signal.
10	FRDR	O	Focus drive output signal.
11	FFON	O	Focus drive output signal.
12	VCOO	O	Osc. circuit output for analog EFM PLL.
13	VCOI	I	Osc. circuit input for analog EFM PLL. fLOCK=8.6436MHz.
14	TEST	I	Test terminal, normally GND.
15	Vss	—	Digital GND.
16	TES2	I	Test terminal, normally GND.
17	TES3	I	Test terminal, normally GND.
18	PDO	O	Charge pump output for analog EFM PLL.
19	VPCO	O	PLL charge pump output for variable pitch.
20	VCKI	I	Clock input from external VCO for variable pitch. fcenter=16.9344MHz.
21	AVDD	—	Analog power supply.
22	IGEN	I	Power supply terminal for OP amplifier.
23	AVSS	—	Analog ground.
24	ADIO	I	Open
25	RFC	O	Open
26	RFDC	I	RF signal input. Input range : 2.15V~5.0V (at VDD=AVDD=5.0V).
27	TE	I	Tracking error signal input. Input range : 2.5V±1.0V (at VDD=AVDD=5.0V).
28	SE	I	Sled error signal input. Input range : 2.5V±1.0V (at VDD=AVDD=5.0V).
29	FE	I	Focus error signal input. Input range : 2.5V±1.0V (at VDD=AVDD=5.0V).
30	VC	I	Center point voltage input termianl.
31	FILO	O	Filter output for master PLL.
32	FILI	I	Filter input for master PLL.
33	PCO	O	Charge pump output for master PLL.
34	CLTY	I	
35	AVS1	—	Analog ground.
36	RFAC	I	EFM signal input.
37	BIAS	I	Asymmetry circuit constant current output.
38	ASYI	I	Asymmetry comparator voltage input.
39	ASYO	O	EFM full swing output (L=Vss, H=VDD).
40	AVDD	—	Analog power supply.
41	DVDD	—	Digital power supply.
42	ASYE	I	Asymmetry circuit ON/OFF (L=OFF, H=ON).
43	PSSL	I	Mode shift input of audio data output. L to serial output, H to parrallel output.
44	WDCK	O	48 bit slot D/A interface. word clock f=2Fs.
45	LRCK	O	48 bit slot D/A interface. LR clock f=Fs.
46	DATA		
47	BCLK		
48	64DATA		
49	64BCLK	O	Open
50	64LRCK	O	Open
51	GTOP	O	Open
52	XUGF	O	Open
53	XPLCK	O	Open
54	GFS		
55	RFCK	O	Open
56	C2PO	O	Open
57	XRAOF	O	Open
58	MNT3	O	Open
59	MNT2	O	Open
60	MNT1	O	Open
61	MNT0	O	Open
62	XTAI	I	X'tal Osc. circuit input. L at X'tal is 16.934MHz, H at X'tal is 33.8688MHz.
63	XTAO	O	X'tal Osc. circuit output.
64	XTSL	I	X'tal select input terminal. L at X'tal is 16.934MHz, H at X'tal is 33.8688MHz.
65	DVss	—	Digital ground.
66	FSTI	I	2/3 cycle input of Pin 62, 63.
67	FSTO	O	2/3 cycle output. Does not vary with variable pitch.
68	FSOF	O	Open
69	C16M	O	Open
70	MD2	I	Digital-Out ON/OFF control terminal (L=OFF, H=ON).
71	DOUT	O	Digital-Out output terminal.
72	EMPH	O	Playback disc emphasis mode output (L=with emphasis, H=without emphasis).
73	WFCK	O	WFCK output.
74	SCOR	O	Sub code sync output terminal (H at either of sub-code sync so or si is detected).
75	SBSO	O	Sub P~W serial output.
76	EXCK	I	Clock input for SBSO read out.
77	SUBQ	O	Sub Q 80 bit output. PCM peak data, level data 16-bit output.
78	SQCK	I	Clock input for SQSO read out.
79	MUTE	I	Mute shift terminal (mute at H).
80	SENS	O	SENS output. Emits to CPU.
81	XRST	I	System reset (reset at L).
82	DIRC	I	Using at 1 track jump.
83	SCLK	I	Clock for SENS serial data read out.
84	DFSW	I	DFCT shift terminal (DFCT measure circuit OFF at H).
85	ATSK	I	Anti-shock terminal.
86	DATA	I	Serial data input from CPU.
87	XLAT	I	Latch input from CPU.
88	CLOK	I	Serial data transfer clock input from CPU.
89	COUT	O	Number of track count signal output.
90	VDD	—	Digital power supply.
91	MIRR	O	Mirror signal output.
92	DFCT	O	Defect signal output.
93	FOK	O	Focus OK output.
94	FSW	O	Output filter shifting output of spindle motor.
95	MON	O	ON/OFF control output of spindle motor.
96	MDP	O	Servo control of spindle motor.
97	MDS	O	Servo control of spindle motor.
98	LOCK	O	By sampling GFS with 460Hz and when GFS at H, H output. L output at consecutively L 8 times.
99	SSTP	I	Terminal for disc innermost circle detection signal.
100	SFDR	O	Sled rive output.

HD6433724-E64F





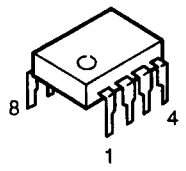
HD6433724-E64F Terminal Function

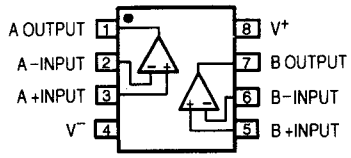
Pin No.	Terminal Name	Symbol	I/O	Det	Res	Ext	Ini	OP	Function
1	P04/AN4	K3	I	Lv	Z	Pd	—	—	Key matrix input.
2	P05/AN5	K2	I	Lv	Z	Pd	—	—	Key matrix input.
3	P06/AN6	K1	I	Lv	Z	Pd	—	—	Key matrix input.
4	P07/AN7	K4	I	Lv	Z	Pd	—	—	Key matrix input.
5	AVss	AVss	I	—	—	—	—	—	GND
6	TEST	TEST	I	—	—	—	—	—	Connect to GND.
7	X2	—	O	—	Z	—	—	—	Open
8	X1	—	I	—	—	—	—	—	Connect to Voc.
9	Vss	Vss	I	—	—	—	—	—	GND
10	OSC1	OSC1	I	—	—	—	—	—	Connect to ceramic oscillator.
11	OSC2	OSC2	O	—	—	—	—	—	Connect to ceramic oscillator.
12	RES	RESET	I	Lv	—	—	—	—	System reset signal input.
13	P10/IRQ0	REMOTE	I	Ed	Z	—	—	—	Interruption signal from remote control.
14	P11/IRQ1	SENS	I	Lv,Ed	Z	—	—	—	Sense input (CXD2515).
15	P12/IRQ1	SCOR	I	Ed	Z	—	—	—	Interruption input from SUB CODE.
16	P13/IRQ3	SIN. OUT	O	—	Z	—	—	—	Communication output for SINCRO REC.
17	P14/IRQ4	SIN. IN	I	Ed	Z	—	—	—	Communication input for SINCRO REC.
18	P15/IRQ5	NC	O	—	Z	—	—	—	Open
19	P16/EVENT	NC	I	—	Z	—	—	—	GND
20	P33/FS27	NC	I	—	Z	—	—	—	Open
21	P32/FS26	NC	I	—	Z	—	—	—	Open
22	P31/FS25	NC	I	—	Z	—	—	—	Open
23	P30/FS24	NC	O	—	Z	—	L	—	Open
24	P47/FS23	NC	O	—	Z	—	L	—	Open
25	P46/FS22	NC	O	—	Z	—	L	—	Open
26	P45/FS21	NC	O	—	Z	—	L	—	Open
27	P44/FS20	NC	O	—	Z	—	L	—	Open
28	P43/FS19	P(A)	O	—	Z	Pdisp	L	—	Segment output for VFD.
29	P42/FS18	P(B)	O	—	Z	Pdisp	L	—	Segment output for VFD.
30	P41/FS17	P(C)	O	—	Z	Pdisp	L	—	Segment output for VFD.
31	P40/FS16	P(D)	O	—	Z	Pdisp	L	—	Segment output for VFD.
32	P50/FS15	P(E)	O	—	Z	Pdisp	L	—	Segment output for VFD.
33	P51/FS14	P(F)	O	—	Z	Pdisp	L	—	Segment output for VFD.
34	P52/FS13	P(G)	O	—	Z	Pdisp	L	—	Segment output for VFD.
35	P53/FS12	P(H)	O	—	Z	Pdisp	L	—	Segment output for VFD.
36	P54/FS11	P(I)	O	—	Z	Pdisp	L	—	Segment output for VFD.
37	P55/FS10	P(J)	O	—	Z	Pdisp	L	—	Segment output for VFD.
38	P56/FS9	P(K)	O	—	Z	Pdisp	L	—	Segment output for VFD.
39	P57/FS8	P(L)	O	—	Z	Pdisp	L	—	Segment output for VFD.
40	P17/Vdisp	Vdisp	I	—	Z	—	—	—	VEE for VFD.
41	P60/FD0	G8	O	—	Z	Pdisp	L	—	Gird output for VFD.
42	P61/FD1	G7	O	—	Z	Pdisp	L	—	Gird output for VFD.
43	P62/FD2	G6	O	—	Z	Pdisp	L	—	Gird output for VFD.
44	P63/FD3	G5	O	—	Z	Pdisp	L	—	Gird output for VFD.
45	P64/FD4	G4	O	—	Z	Pdisp	L	—	Gird output for VFD.
46	P65/FD5	G3	O	—	Z	Pdisp	L	—	Gird output for VFD.
47	P66/FD6	G2	O	—	Z	Pdisp	L	—	Gird output for VFD.
48	P67/FD7	G1	O	—	Z	Pdisp	L	—	Gird output for VFD.
49	P70/FD8	NC	O	—	Z	—	L	—	Open
50	P71/FD9	NC	I	—	Z	—	—	—	Open
51	P72/FD10	NC	I	—	Z	—	—	—	Open
52	P73/FD11	NC	I	—	Z	—	—	—	Open
53	P74/FD12	NC	I	—	Z	—	—	—	Open
54	P75/FD13	NC	I	—	Z	—	—	—	Open
55	P76/FD14	NC	I	—	Z	—	—	—	Open
56	P77/FD15	NC	I	—	Z	—	—	—	Open
57	Vcc	Vcc	I	—	—	—	—	—	Power supply.
58	P80	A.MUTE	O	—	Z	Pu	H	—	Analog mute output.
59	P81	MDT	O	—	Z	—	L	—	SM5845 or SM5841 control data output.
60	P82	MCK	O	—	Z	—	L	—	SM5845 or SM5841 control bit clock output.
61	P83	MLE	O	—	Z	—	L	—	SM5845 or SM5841 control latch output.
62	P84	OPEN	O	—	Z	—	L	—	CD MECHA. Loader drive signal.
63	P85	CLOSEE	O	—	Z		L	—	CD MECHA. Loader drive signal.
64	P86	D.MUTE	O	—	Z	Pu	H	—	Digital mute signal.
65	P87	LD ON	O	—	Z	—	L	—	Laser control signal.
66	P90/PWM	SCLK	O	—	Z	—	H	—	Servo setting value read clock output (CXD2545).
67	P91/SCK1	CLK	O	—	Z	—	H	—	Control clock output (CXD2545).
68	P92/SI1	XLT	O	—	Z	—	H	—	Control latch output (CXD2545).
69	P93/SO1	DATA	O	—	Z	—	H	—	Control data output (CXD2545).
70	P94/SCK2	SQCK	I	—	Z	—	—	—	SUB CODE clock input (CXD2545).
71	P95/SI2	SUBQ	I	—	Z	—	—	—	SUB CODE Q data input.
72	P96/SO2	NC	O	—	Z	—	—	—	Open
73	P97	NC	O	—	Z	—	—	—	735/635 select
74	PA0	MAINS	O	—	Z	—	—	—	ALPHA 1 ON/$\overline{\text{OFF}}$ control to SM5845.
75	PA1	SHFTN	O	—	Z	—	—	—	BIT SHIFT ON/$\overline{\text{OFF}}$ control to SM5845.
76	AVcc	AVcc	I	—	—	—	—	—	Power supply.
77	P00/AN0	OUT SW	I	Lv	Z	—	—	—	Loader open signal (L: open).
78	P01/AN1	IN SW	I	Lv	Z	—	—	—	Loader close signal (L: close).
79	P02/AN2	GFS	I	Lv	Z	—	—	—	GFS input (CXD2545).
80	P03/AN3	FOK	I	Lv	Z	—	—	—	FOK input (CXD2545).

Note:

I/O: Port input/output direction (I: input, O: output).
Det: Input level detection mode (Lv: level detection, Ed: edge detection).
Res: Port state at reset (Z: high impedance).
Ext: External addition (Pu: external pull up, Pd: external pull down, but mask option is existing).
Ini: Initial output value.
Op: Mask option.

BA15218
μPC4570C





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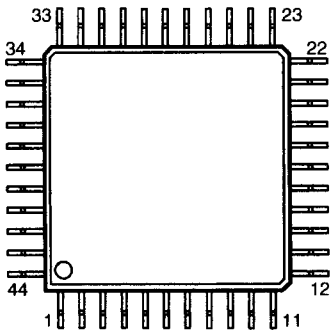

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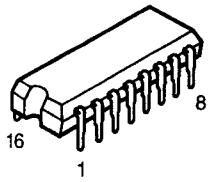

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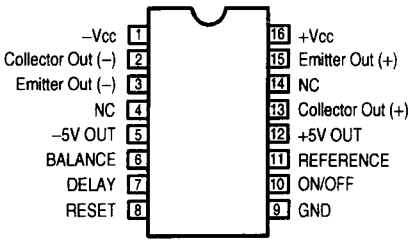

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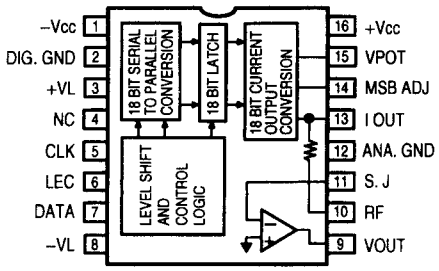
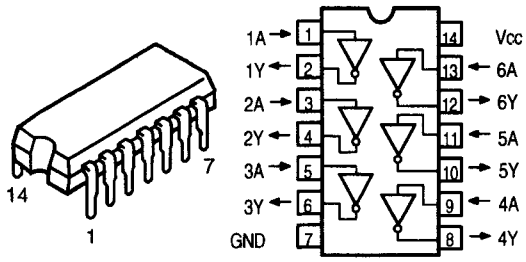
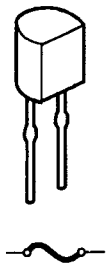


TC74HCU04AP

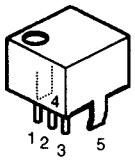


● IC PROTECTOR

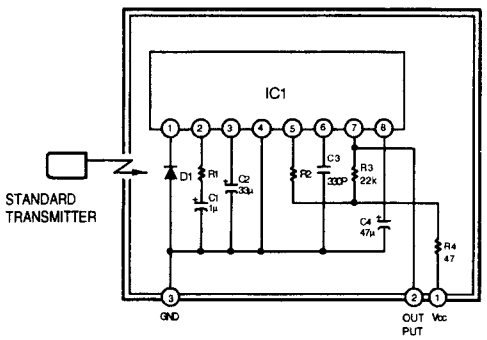
ICP-N15T



SBX1910 (Remote Control Receiver)



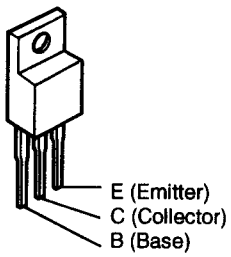
1. Vcc
2. Output
3. GND
4. Case Fin
5. Case Fin



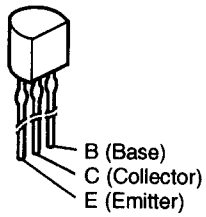
IC1 : CX20106A Chip
D1 : PIN Photodiode Chip
C1,C2,C4 : Aluminum Electrolytic Capacitor
C3 : SL Characteristic ±5%
R1 : Gain control resistor
R2 : for control resistor (Using ±1%)
R (Other than above items) : ±5%

● TRANSISTORS

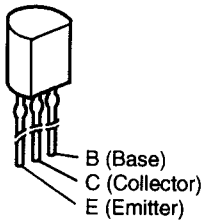
2SD1762 (E/F)
2SB1185 (E/F)



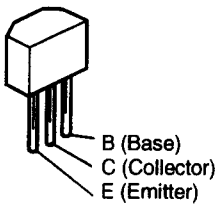
2SD2144



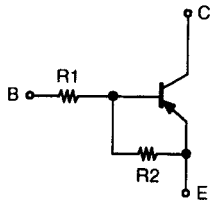
2SA934 (Q)
2SC2060 (Q)



2SA933S (S)
DTA124XS (22k-47k)
DTC114ES (10k-10k)
RN2205 (2.2k-47k)

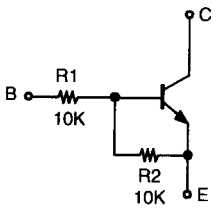


DTA124XS (22k-47k)
RN2205 (2.2k-47k)



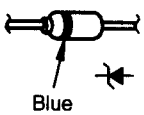
	R1	R2
DTA124XS	22 kohm	47 kohm
RN2205	2.2 kohm	47 kohm

DTC114ES (10k-10k)

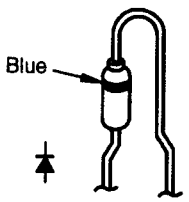


● DIODES

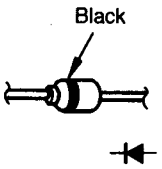
MTZJ6.2A
MTZJ6.8A
MTZJ8.2A
MTZJ24A



1SR35-200A



1SS252



NOTE FOR PARTS LIST

- Part indicated with the mark "⊙" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:

Parts marked with this symbol ⚠ ■ have critical characteristics.

Use ONLY replacement parts recommended by the manufacturer.

● Resistors

Ex.: RN (Type) 14K (Shape and performance) 2E (Power) 182 (Resistance) G (Allowable error) FR (Others)

RD : Carbon	2B : 1/8W	F : ±1%	P : Pulse-resistant type
RC : Composition	2E : 1/4W	G : ±2%	NL : Low noise type
RS : Metal oxide film	2H : 1/2W	J : ±5%	NB : Non-burning type
RW : Winding	3A : 1W	K : ±10%	FR : Fuse-resistor
RN : Metal film	3D : 2W	M : ±20%	F : Lead wire forming
RK : Metal mixture	3F : 3W		
	3H : 5W		

*** Resistance**

1 8 2 ⇒ 1800 ohm = 1.8 kohm
- 2 : Indicates number of zeros after effective number.
- 1 8 : 2-digit effective number.

• Units: ohm

1 R 2 ⇒ 1.2 ohm
- 2 : 1-digit effective number.
- 1 R : 2-digit effective number, decimal point indicated by R.

• Units: ohm

● Capacitors

Ex.: CE (Type) 04W (Shape and performance) 1H (Dielectric strength) 2R2 (Capacity) M (Allowable error) BP (Others)

CE : Aluminum foil electrolytic	0J : 6.3V	F : ±1%	HS : High stability type
CA : Aluminum solid electrolytic	1A : 10V	G : ±2%	BP : Non-polar type
CS : Tantalum electrolytic	1C : 16V	J : ±5%	HR : Ripple-resistant type
CQ : Film	1E : 25V	K : ±10%	DL : For change and discharge
CK : Ceramic	1V : 35V	M : ±20%	HF : For assuring high frequency
CC : Ceramic	1H : 50V	Z : +80% −20%	U : UL part
CP : Oil	2A : 100V	P : +100% −0%	C : CSA part
CM : Mica	2B : 125V	C : ±0.25pF	W : UL-CSA type
CF : Metallized	2C : 160V	D : ±0.5pF	F : Lead wire forming
CH : Metallized	2D : 200V	= : Others	
	2E : 250V		
	2H : 500V		
	2J : 630V		

*** Capacity (electrolyte only)**

2 2 2 ⇒ 2200μF
- 2 : Indicates number of zeros after effective number.
- 2 2 : 2-digit effective number.

• Units: μF.

2 R 2 ⇒ 2.2μF
- 2 : 1-digit effective number.
- 2 R : 2-digit effective number, decimal point indicated by R.

• Units: μF.

*** Capacity (except electrolyte)**

2 2 2 ⇒ 2200pF=0.0022μF
- 2 (More than 2) : Indicates number of zeros after effective number.
- 2 2 : 2-digit effective number.

• Units: pF.

2 2 1 ⇒ 220pF
- 1 (0 or 1) : Indicates number of zeros after effective number.
- 2 2 : 2-digit effective number.

• Units: pF.

• When the dielectric strength is indicated in AC, "AC" is included after the dieelectric strength value.

PARTS LIST OF P.W.B. UNIT ASS'Y

1U-9369A CD P.W.B. UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC201	262 2387 002	IC HD6433724E64F	
IC203	263 0565 007	IC BA15218	
IC303,304	262 1409 004	IC PCM61P-L	
IC371	262 1761 001	IC SM5841BP	
IC501	263 0693 005	IC M5290P	
IC502,503	268 0073 905	IC ICP-N15	IC protector
IC601	499 0295 002	Remocon sensor SBX1910-52	
IC701	263 0565 007	IC BA15218	
TR201	274 0120 002	Transistor 2SD1762(E/F)	
TR202	273 0195 908	Transistor 2SC2060(Q)TP	
TR203	271 0271 907	Transistor 2SA934(Q)TP	
TR204,205	269 0020 906	Transistor DTC114ES(10K-10K)	
TR301,302	274 0160 907	Transistor 2SD2144STPU	
TR501	274 0120 002	Transistor 2SD1762(E/F)	
TR502	272 0083 004	Transistor 2SB1185(E/F)	
TR503	271 0271 907	Transistor 2SA934(Q)TP	
TR701	271 0192 905	Transistor 2SA933S(S)	
TR702	269 0014 909	Transistor DTA124XS(22K-47K)	
TR703	269 0020 906	Transistor DTC114ES(10K-10K)	
TR705,706	274 0160 907	Transistor 2SD2144STPU	
D501~506	276 0553 905	Diode 1SR35-200A	
D601~603	276 0616 907	Diode 1SS252	
D701	276 0616 907	Diode 1SS252	
ZD202,203	276 0637 902	Zener diode MTZJ6.2A	6.2V
ZD201	276 0644 924	Zener diode MTZJ8.2A	8.2V
ZD501	276 0644 908	Zener diode MTZJ6.8A	6.8V
ZD502	276 0645 936	Zener diode MTZJ24A	24V
LD520	393 9420 907	LED SEL4117R	
FL601	393 4110 005	FLD FIP8NM6A	
RESISTORS GROUP			
R239,240	209 0047 903	0.6 jumper wire	
R331,332	209 0047 903	0.6 jumper wire	
R335,336	209 0047 903	0.6 jumper wire	
R381,382	209 0047 903	0.6 jumper wire	
R715,716	244 2051 961	Metal oxide 100ohm 1W	RS14B3A101JNBS(S)
R721,722	209 0047 903	0.6 jumper wire	
VR301,302	211 6093 970	Semi fixed resistor 100kohm	V06PB104
VR701	211 0661 010	Variable resistor 2kohm	V0920P30FC202
CAPACITORS GROUP			
C201~204	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C205	254 4254 954	Electrolytic 220μF/16V	CE04W1C221M
C206	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C207	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C208	209 0047 903	0.6 jumper wire	
C209,210	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C212,213	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C218	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C219	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C220	253 9039 906	BC ceramic cap. 0.1μF/25V	CK45=1E104Z
C231	253 9039 906	BC ceramic cap. 0.1μF/25V	CK45=1E104Z
C241	253 9039 906	BC ceramic cap. 0.1μF/25V	CK45=1E104Z
C245	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C246	209 0047 903	0.6 jumper wire	
C249	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C301	253 1180 921	Ceramic 1000pF/50V	CK45B1H102K
C308,309	254 4254 954	Electrolytic 220μF/16V	CE04W1C221M
C316,316	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C317,318	253 1180 921	Ceramic 1000pF/50V	CK45B1H102K
C354	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C361	253 1181 904	Ceramic 0.01μμF/50V	CK45F1H103Z
C372,373	253 4536 909	Ceramic 10pF/50V	CC45SL1H100D
C375,376	253 1180 905	Ceramic 680pF/50V	CK45B1H681K
C377,378	253 9031 988	BC ceramic cap. 5600pF/25V	CK45=1E562K
C379	253 9039 906	BC ceramic cap. 0.1μF/25V	CK45=1E104Z
C380	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C501	254 4254 792	Electrolytic 2200μF/16V	CE04W1C222MC
C502	254 4255 717	Electrolytic 4700μF/16V	CE04W1C472MC
C503,504	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C505	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C506	254 4260 964	Electrolytic 3.3μF/50V	CE04W1H3R3M
C507	254 4262 946	Electrolytic 47μF/63V	CE04W1J470M
C508	254 4261 921	Electrolytic 100μF/50V	CE04W1H101M
C509,510	254 4258 934	Electrolytic 33μF/35V	CE04W1V330M
C512,513	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C514,515	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C601	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C701,702	253 4537 982	Ceramic 56pF/50V	CC45SL1H560J
C705,706	254 4250 929	Electrolytic 100μF/6.3V	CE04W0J101M
C708,709	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C711,712	253 1179 961	Ceramic 330pF/50V	CK45B1H331K
C723	254 4254 954	Electrolytic 220μF/16V	CE04W1C221M
C791,792	253 4538 949	Ceramic 100pF/50V	CC45SL1H101J

OTHER PARTS GROUP				Q'ty
CW041	203 6503 016	4P KR-DA (S) connector cord		1
CW051	203 8280 052	5P KR-DA connector cord		1
CW052	203 8424 009	5P connector cord (AMP)		1
CW081	204 2811 006	8P PH-SAN connector cord		1
CW091	204 2812 005	9P PH-SAN connector cord		1
CX041	205 0343 045	4P connector base(KR-PH)		1

1U-9369 CD P.W.B. UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks	Q'ty
CX051	205 0343 058	5P connector base(KR-PH)		1
CX081	205 0343 087	8P connector base(KR-PH)		1
CX091	205 0343 090	9 P connector base (KR-PH)		1
CX291	205 0990 045	29P FFC connector base		1
CY231	205 0990 003	23P FFC connector base		1
CY291	205 0990 045	29P FFC connector base		1
EP701	412 4276 004	PWB earth		1
JK201	269 0170 005	TOTX178		1
JK202	204 8416 007	Mini jack		1
JK301	204 8537 009	2P pin jack (GNB) D		1
JK501	203 2349 009	2P inlet		1
JK701	204 8364 023	Head phone jack (gold)		1
S601~605	212 5604 910	Tact switch		5
S608	212 5604 910	Tact switch		1
ST001	205 0452 017	Style pin		1
ST003	205 0452 017	Style pin		1
SW501	212 1039 000	1P Push switch		1
T501	233 9682 003	Power trans. (E2)		1
X201	399 0111 909	Ceramic resonator	CST4.23MGW040-TF01	1
XL371	399 0112 005	Crystal 16.9344 MHz		1

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC201	262 2387 002	IC HD6433724F	
IC203	263 0565 007	IC BA15218	
IC301	262 1869 000	IC SM5845AF	
IC303,304	262 1409 004	IC PCM61P-L	
IC305,306	262 0864 006	IC UPC4570C	
IC351	262 1316 003	IC TC74HC74AP	
IC501	263 0693 005	IC M5290P	
IC502,503	268 0073 905	IC ICP-N15	IC protector
IC601	499 0295 002	Remocon sensor SBX1910-52	
IC701	263 0565 007	IC BA15218	
TR201	274 0120 002	Transistor 2SD1762(E/F)	
TR202	273 0195 908	Transistor 2SC2060(Q)TP	
TR203	271 0271 907	Transistor 2SA934(Q)TP	
TR204,205	269 0020 906	Transistor DTC114ES(10K-10K)	
TR301,302	274 0160 907	Transistor 2SD2144STPU	
TR351	269 0089 905	Transistor RN2205	
TR501	274 0120 002	Transistor 2SD1762(E/F)	
TR502	272 0083 004	Transistor 2SB1185(E/F)	
TR503	271 0271 907	Transistor 2SA934(Q)TP	
TR701	271 0192 905	Transistor 2SA933S(S)	
TR702	269 0014 909	Transistor DTA124XS (22K-47K)	
TR703	269 0020 906	Transistor DTC114ES(10K-10K)	
TR705,706	274 0160 907	Transistor 2SD2144STPU	
D351,352	276 0616 907	Diode 1SS252	
D501~506	276 0553 905	Diode 1SR35-200A	
D601~603	276 0616 907	Diode 1SS252	
D701	276 0616 907	Diode 1SS252	
ZD202,203	276 0637 902	Zener diode MTZJ6.2A	6.2V
ZD201	276 0644 924	Zener diode MTZJ8.2A	8.2V
ZD501	276 0644 908	Zener diode MTZJ6.8A	6.8V
ZD502	276 0645 936	Zener diode MTZJ24A	24V
LD520	393 9420 907	LED SEL4117R	
FL601	393 4110 005	FLD FIP8NM6A	

Ref. No.	Part No.	Part Name	Remarks
RESISTORS GROUP			
R239	209 0047 903	0.6 jumper wire	
R240	209 0047 903	0.6 jumper wire	
R315,316	209 0047 903	0.6 jumper wire	
R715,716	244 2051 961	Metal oxide 100ohm 1W	S14B3A101JNBS(S)
R721,722	209 0047 903	0.6 jumper wire	
VR301,302	211 6093 970	Semi fixed resistor 100kohm	V06PB104
VR701	211 0661 010	Variable resistor 2kohm	V0920P30FC202
CAPACITORS GROUP			
C201~204	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C205	254 4254 954	Electrolytic 220µF/16V	CE04W1C221M
C206	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C207	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C208	209 0047 903	0.6 jumper wire	
C209,210	254 4254 941	Electrolytic 100µF/16V	CE04W1C101M
C212,213	254 4254 941	Electrolytic 100µF/16V	CE04W1C101M
C218	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C219	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C220	253 9039 906	BC ceramic cap. 0.1µF/25V	CK45=1E104Z
C231	253 9039 906	BC ceramic cap. 0.1µF/25V	CK45=1E104Z
C241	253 9039 906	BC ceramic cap. 0.1µF/25V	CK45=1E104Z
C245	253 1180 921	Ceramic 1000pF/50V	CK45B1H102K
C246	209 0047 903	0.6 jumper wire	
C249	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C301	253 1180 921	Ceramic 1000pF/50V	CK45B1H102K
C302,303	253 4536 909	Ceramic 10pF/50V	CC45SL1H100D
C304	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C305	253 9039 906	BC ceramic cap. 0.1µF/25V	CK45=1E104Z
C308,309	254 4254 954	Electrolytic 220µF/16V	CE04W1C221M
C315,316	254 4313 950	Electrolytic 100µF/50V	CE04W1H101M
C317,318	255 4232 937	Polypropylene film 1000pF/100V	CQ93P2A102J
C331,332	255 4232 908	Polypropylene film 820pF/100V	CQ93P2A821J
C333,334	255 4232 911	Polypropylene film 180pF/100V	CQ93P2A181J
C335,336	255 4232 937	Polypropylene film 1000pF/100V	CQ93P2A102J
C337,338	255 4232 979	Polypropylene film 200pF/100V	CQ93P2A201J
C351	253 4537 966	Ceramic 47pF/50V	CC45SL1H470J
C352	253 1180 947	Ceramic 1500pF/50V	CK45B1H152K
C353	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C354	253 1180 921	Ceramic 1000pF/50V	CK45B1H102K
C355	253 9039 906	BC ceramic cap. 0.1µF/25V	CK45=1E104Z
C361	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C501	254 4254 792	Electrolytic 2200µF/16V	CE04W1C222MC
C502	254 4255 717	Electrolytic 4700µF/16V	CE04W1C472MC
C503,504	254 4254 941	Electrolytic 100µF/16V	CE04W1C101M
C505	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C506	254 4260 964	Electrolytic 3.3µF/50V	CE04W1H3R3M
C507	254 4262 946	Electrolytic 47µF/63V	CE04W1J470M
C508	254 4261 921	Electrolytic 100µF/50V	CE04W1H101M

Ref. No.	Part No.	Part Name	Remarks
C509,510	254 4258 934	Electrolytic 33mF/35V	CE04W1V330M
C512,513	254 4254 941	Electrolytic 100mF/16V	CE04W1C101M
C514,515	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C601	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C701,702	253 4537 982	Ceramic 56pF/50V	CC45SL1H560J
C705,706	254 4250 929	Electrolytic 100µF/6.3V	CE04W0J101M
C708,709	254 4254 941	Electrolytic 100µF/16V	CE04W1C101M
C711,712	253 1179 961	Ceramic 330pF/50V	CK45B1H331K
C723	254 4254 954	Electrolytic 220µF/16V	CE04W1C221M
C791,792	253 4538 949	Ceramic 100pF/50V	CC45SL1H101J
C793	253 1180 921	Ceramic 1000pF/50V	CK45B1H102K

OTHER PARTS GROUP				Q'ty
CW041	203 6503 016	4P KR-DA (S) connector cord		1
CW051	203 8280 052	5P KR-DA connector cord		1
CW052	203 8424 009	5P connector cord (AMP)		1
CW081	204 2811 006	8P PH-SAN connector cord		1
CW091	204 2812 005	9P PH-SAN connector cord		1
CX041	205 0343 045	4P connector base(KR-PH)		1
CX051	205 0343 058	5P connector base(KR-PH)		1
CX081	205 0343 087	8P connector base(KR-PH)		1
CX091	205 0343 090	9 P connector base (KR-PH)		1
CX291	205 0990 045	29P FFC connector base		1
CY231	205 0990 003	23P FFC connector base		1
CY291	205 0990 045	29P FFC connector base		1
EP701	412 4276 004	PWB earth		1
JK201	269 0170 005	TOTX178		1
JK202	204 8416 007	Mini jack		1
JK301	204 8537 009	2P pin jack (GNB) D		1
JK501	203 2349 009	2P inlet		1
JK701	204 8364 023	Head phone jack (gold)		1
S601~605	212 5604 910	Tact switch		5
S608	212 5604 910	Tact switch		1
ST001	205 0452 017	Style pin		1
ST003	205 0452 017	Style pin		1
SW501	212 1039 000	1P Push switch		1
T501	233 9682 003	Power trans. (E2)		1
X201	399 0111 909	Ceramic resonator	CST4.23MGW040-TF01	1
X301	399 0112 005	Crystal 16.9344 MHz		1

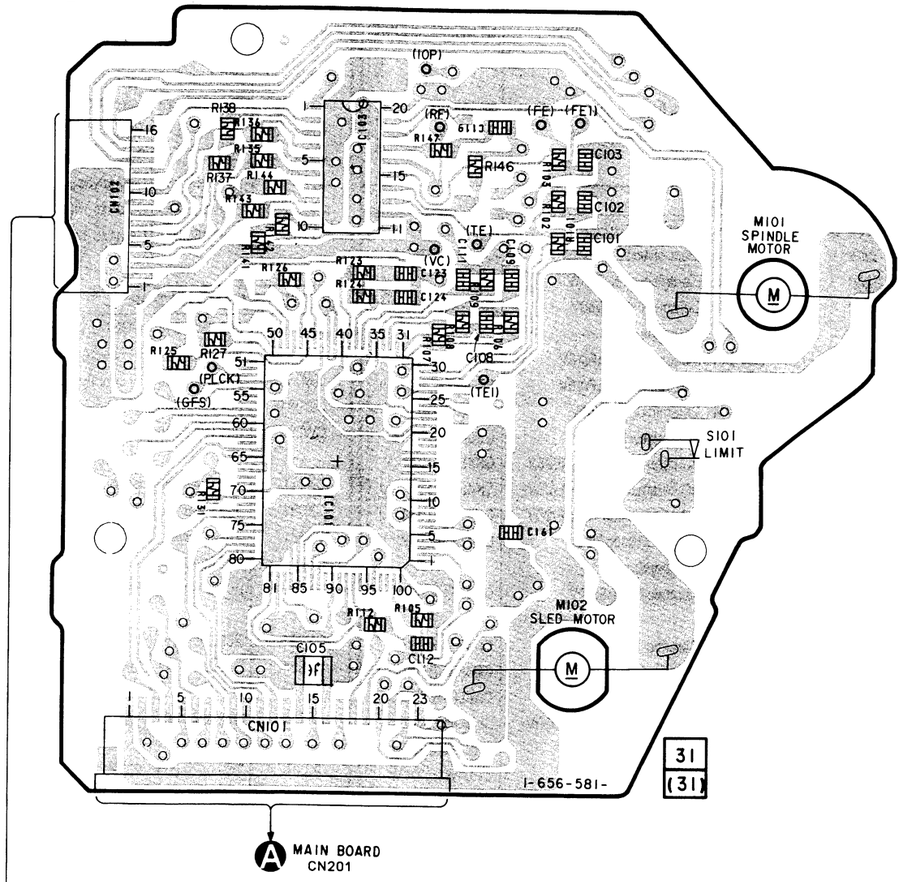
PRINTED WIRERING BOARD

1 2 3 4 5 6 7 8

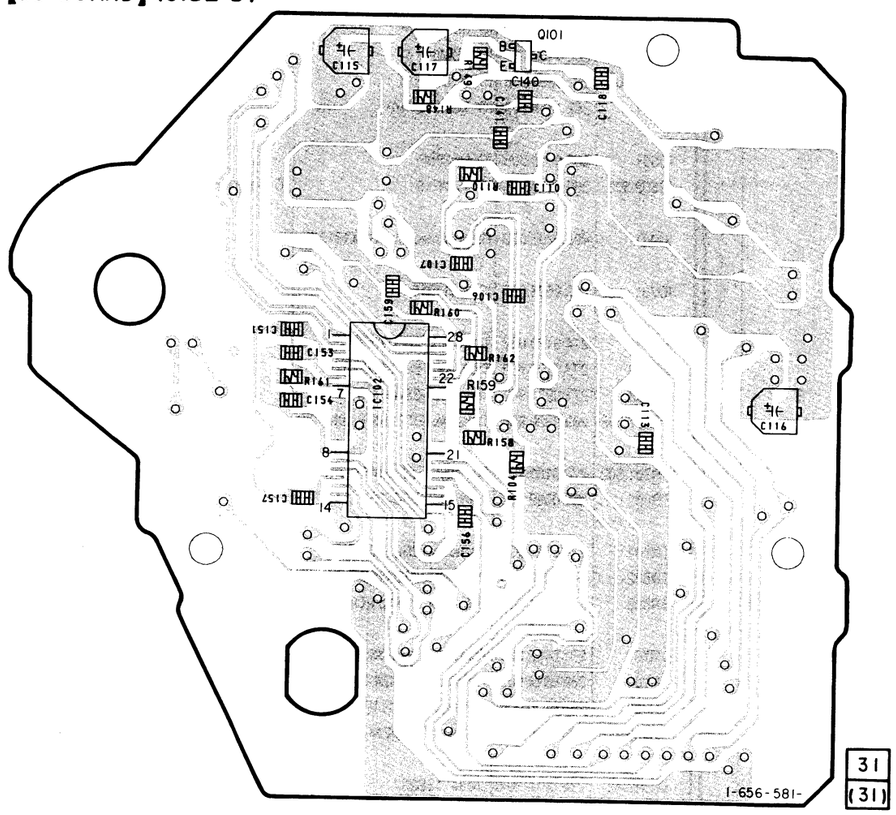
A B C D E

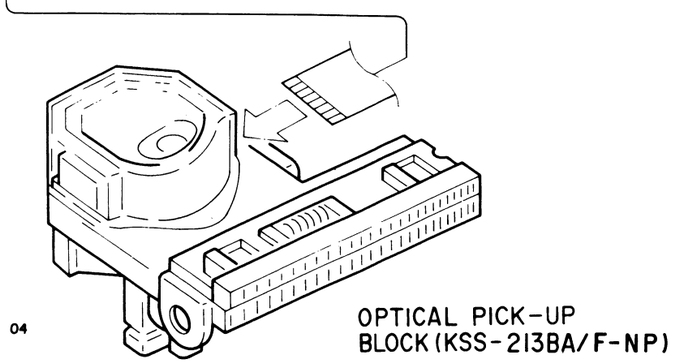
CD MECHANISM UNIT
SA4-6735-09A P.W.B.ASS'Y

【BD BOARD】(SIDE A)



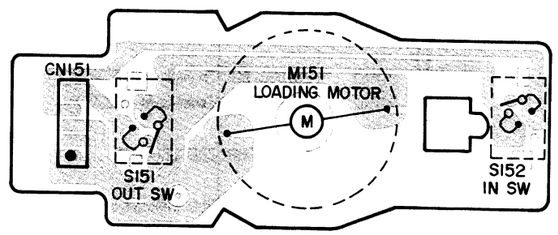
【BD BOARD】(SIDE B)





OPTICAL PICK-UP
BLOCK (KSS-213BA/F-NP)

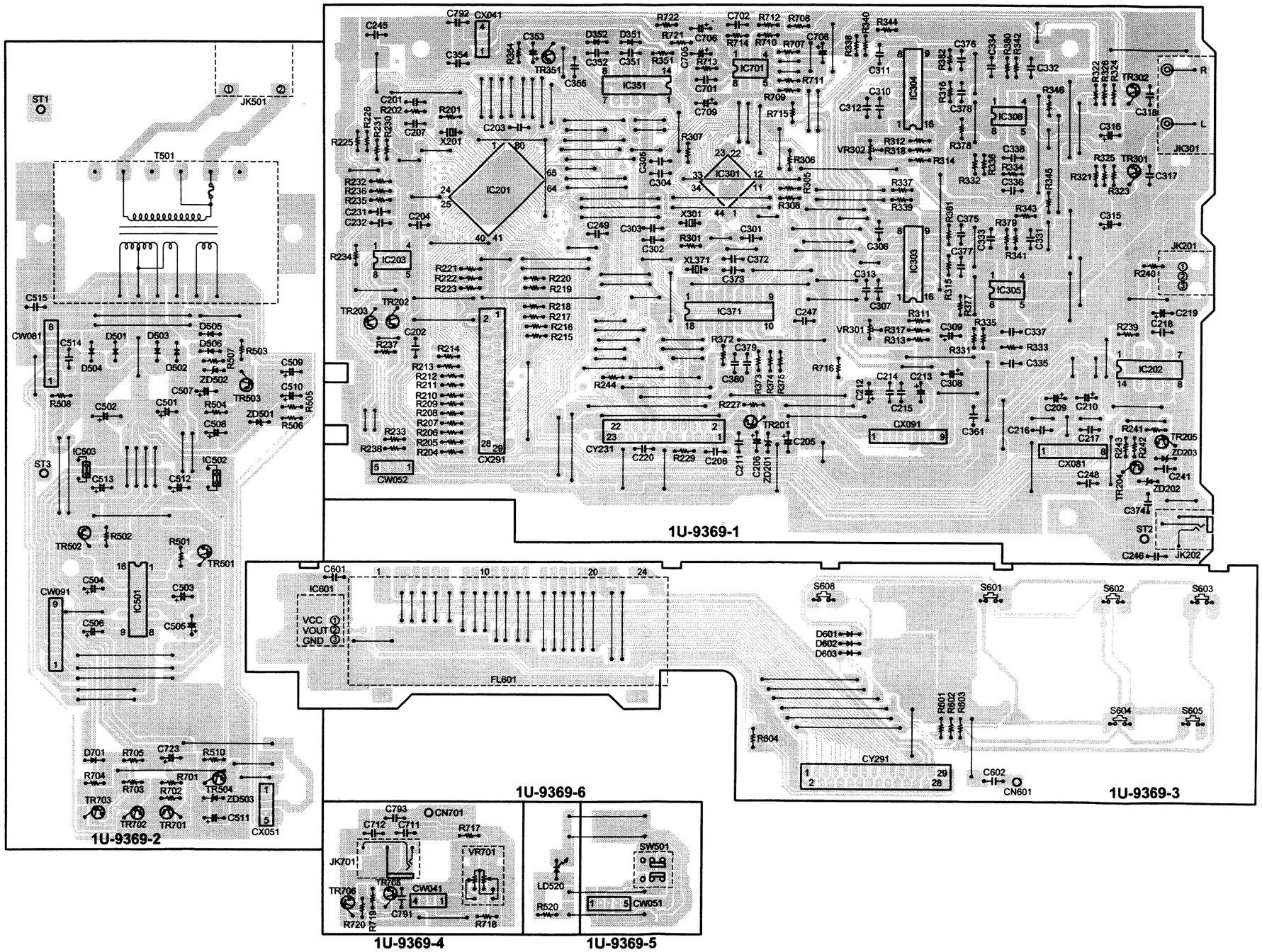
S16 4572 111 LOADING P.W.B.ASS'Y



1 2 3 4 5 6 7 8

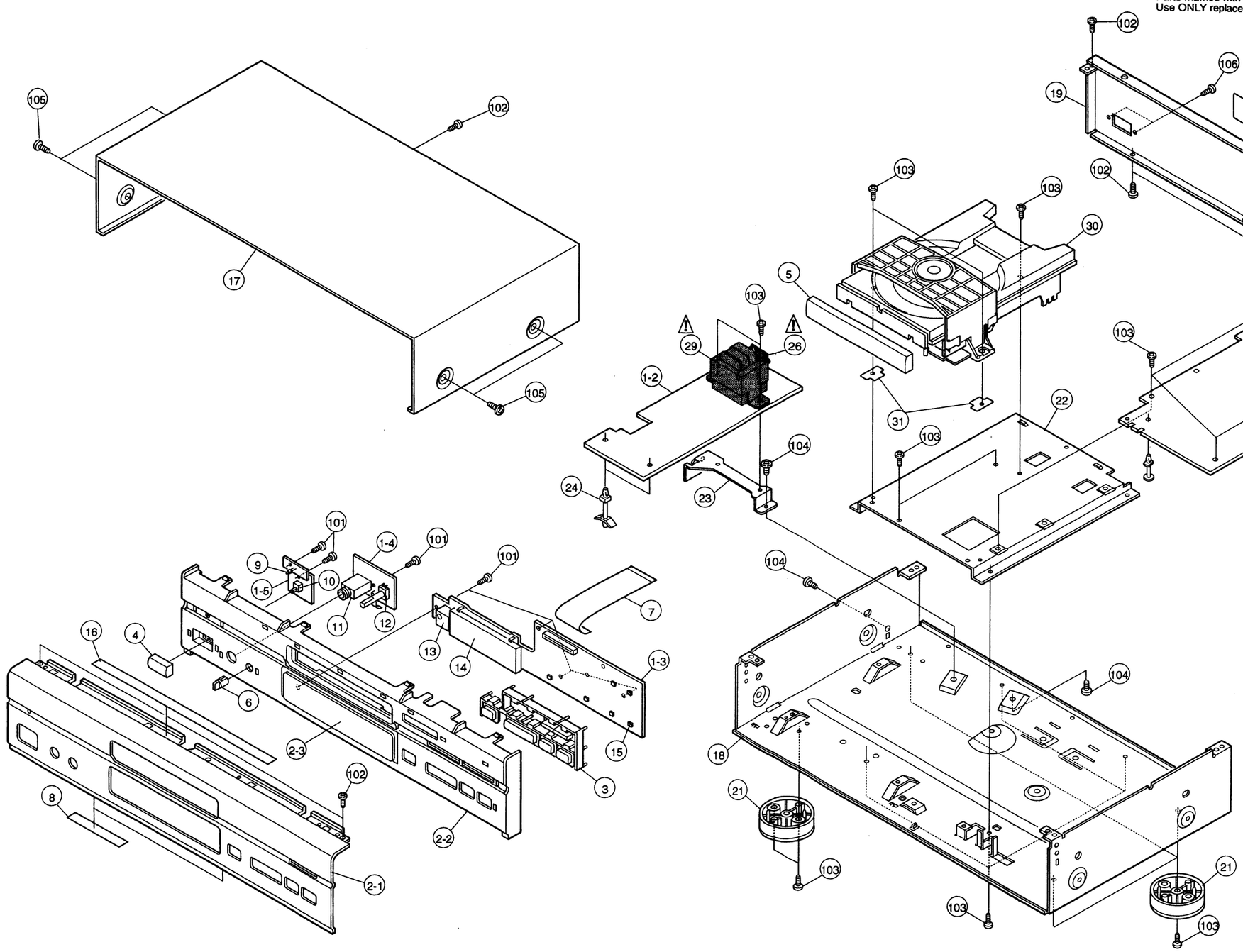
A B C D E

1U-9369A CD P.W.B. UNIT



EXPLODED VIEW OF CHASSIS AND CABINET

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.



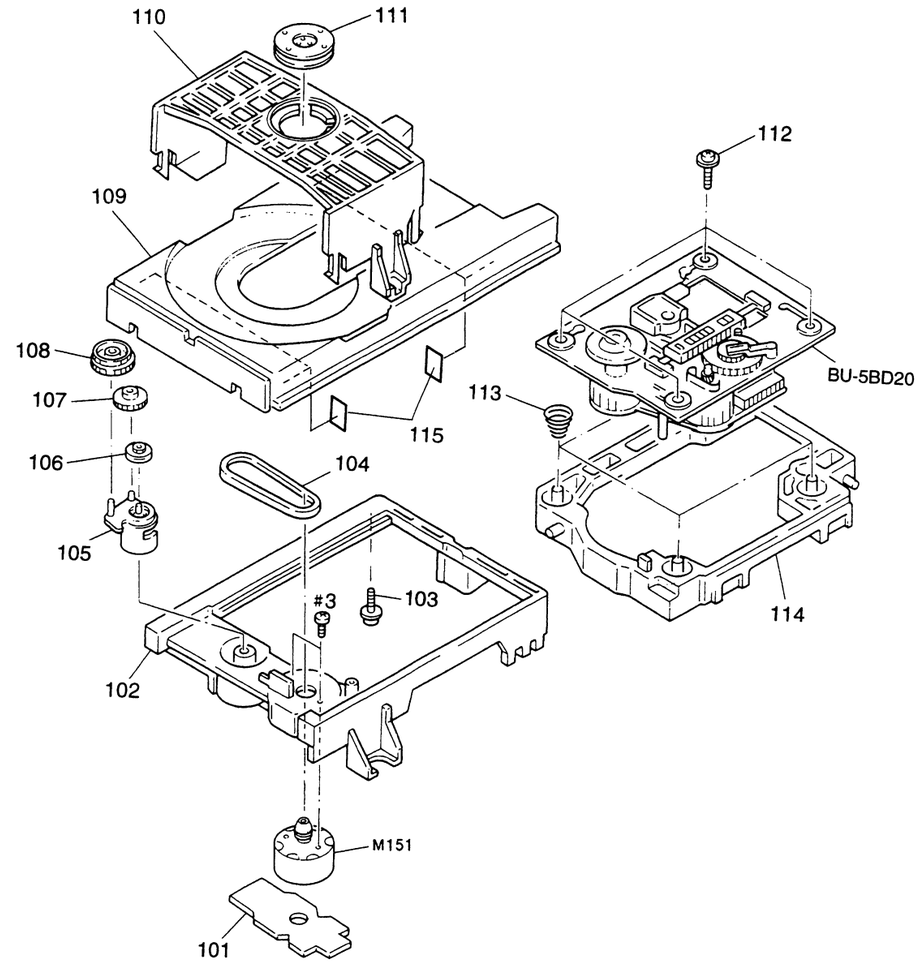
PARTS LIST EXPLODED VIEW

Ref. No.	Part No.	Part Name	Remarks	Q'ty
◉ 1	1U- 9369	CD P.W.B. unit ass'y	DCD735	1
◉ 1	1U- 9369 A	CD P.W.B. unit ass'y	DCD635	1
1-1	—	Main P.W.B. unit		
1-2	—	Power P.W.B. unit		
1-3	—	Display P.W.B. unit		
1-4	—	H/P Jack P.W.B. unit		
1-5	—	Power switch P.W.B. unit		
◉ 2	144 2535 200	Front panel Ass'y	DCD735 Black	1
◉ 2	144 2535 213	Front panel Ass'y	DCD735 Gold	1
◉ 2	144 2535 226	Front panel Ass'y	DCD635 Black	1
◉ 2	144 2535 239	Front panel Ass'y	DCD635 Gold	1
2-1	—	Front panel		
2-2	—	Inner panel		
2-3	—	Window		
3	113 1818 005	Function knob	Black model	1
3	113 1818 018	Function knob	Gold model	1
4	113 1689 001	Power switch knob	Black model	1
4	113 1689 014	Power switch knob	Gold model	1
◉ 5	146 1685 005	Loader panel	Black model	1
◉ 5	146 1685 018	Loader panel	Gold model	1
6	112 0645 111	Headphone knob	Black model	1
6	112 0645 124	Headphone knob	Gold model	1
7	009 0109 018	29P FFC	L=125	1
8	122 9030 009	Himeron sheet		2
9	393 9420 907	LED (SEL4117R-T)	LD520	1
10	212 1039 000	1P push switch	SW501	1
11	204 8364 023	Headphone jack (Gold)	JK701	1
12	211 0661 010	Variable resistor 2kohm	VR701	1
13	499 0295 002	Remote sensor (SBX1910-52)	IC601	1
14	393 4110 005	FL tube (FIP8NM6A)	FL601	1
15	212 5604 910	Tact switch	S601~606	6
16	122 0187 100	Top cover spacer		1
◉ 17	102 0424 005	:Top cover	Black model	1
◉ 17	102 0424 018	:Top cover	Gold model	1
◉ 18	411 1233 319	Chassis		1
◉ 19	105 1232 004	Back panel	DCD735	1
◉ 19	105 1232 017	Back panel	DCD635	1
20	513 2358 007	E2 laser caution		1
21	104 0260 100	Foot ass'y		4
22	412 4222 100	Mecha holder		1
23	412 4223 002	Trans bracket		1
24	415 9016 048	P.C.B. holder		2
25	269 0170 005	Optical link (TOTX178)	JK201	1
⚠ 26	203 2349 009	2P inlet	JK501	1
27	204 8416 007	Mini jack	JK202	1
28	204 8537 009	2P pin jack	JK301	1
⚠ 29	233 9682 003	:Power transformer (E2)	T-501	1
30	337 0047 004	CD Mech. (CDM14-5BD20)		1
31	461 0971 004	Spacer		2

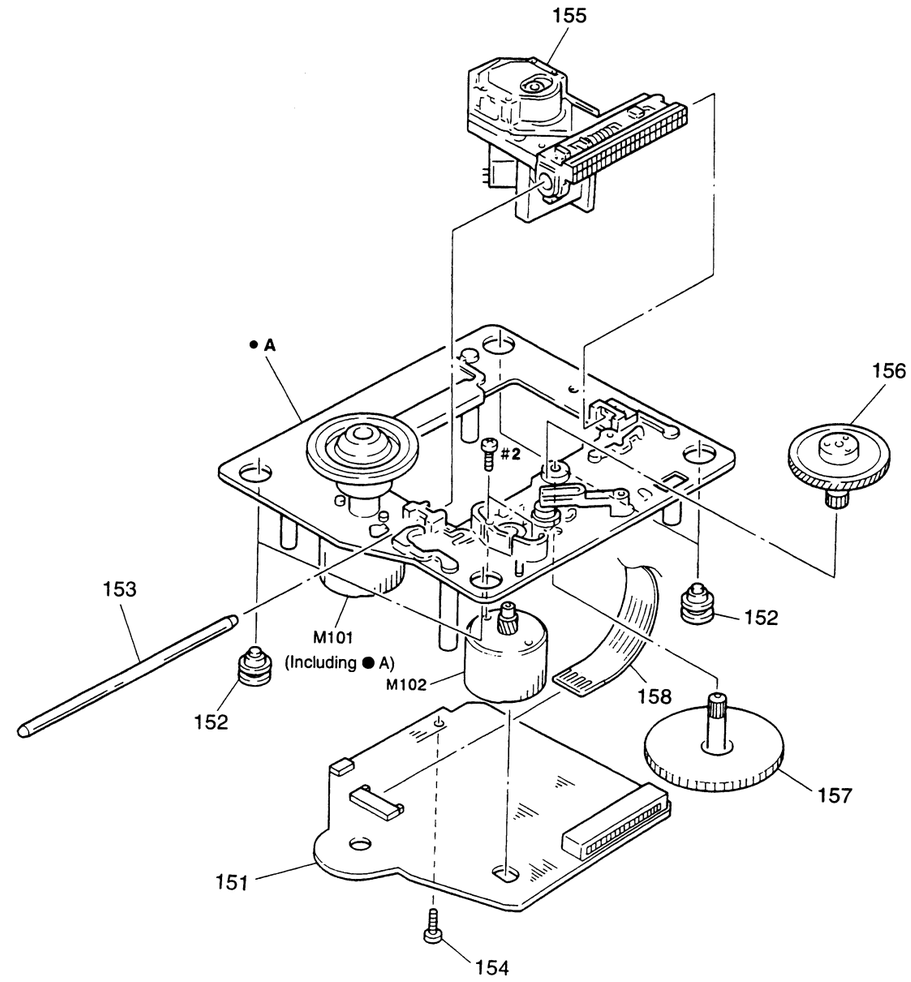
Ref. No.	Part No.	Part Name	Remarks	Q'ty
SCREWS				
101	473 7508 017	Screw 3x10 (P) Black		5
102	473 7015 005	Screw 3X6 (S) Black		8
103	473 7002 018	Screw 3X8 (S)		22
104	473 0040 016	Screw 4X6 (S)		3
105	473 7007 000	Screw 4X8 (S) Black	Black model	4
105		Screw 4x8 CTTS	Gold model	4
106	477 0064 107	Fixing screw 3x10		4
PACKING & ACCESSORIES				
	203 2310 009	2P pin cord		1
⚠	206 2108 003	:AC cord with plug	E2 mdel only	1
⚠	206 2113 001	:AC cord with connector (EK)	EK mdel only	1
	399 0360 006	Remote control unit (RC-266)	With batteries	1
	501 1956 009	Carton case	DCD735 E2	1
	501 1956 012	Carton case	DCD635 E2	1
	501 1975 006	Carton case	DCD635 EK	1
	503 9223 015	Cushion	E2 mdel	2
	503 1173 008	Cushion	EK mdel	2
	503 1264 001	Cushion sheet		1
	505 0131 050	Cabinet cover	EK mdel only	1
	505 0283 018	Poly. cover		1
	511 3089 007	Inst. manual		1
	513 1349 004	Thermal carbon film		1
	513 1389 006	Control card base		1
	513 9111 001	Color label (gold)	Gold model only	2

EXPLODED VIEW OF CD MECHANISM UNIT

MD UNIT



OPICAL PICK-UP UNIT



PARTS LIST OF CD MECHANISM UNIT

Ref. No.	Part No.	Part Name	Remarks
51	S16 4572 111	Loading P.W.B. Ass'y	See Page 26
52	S49 3311 101	Chassis (MD)	
53	S49 1758 321	Yoke Bracket	
54	S49 2764 901	Belt	
55	S49 3310 901	Cam	
56	S49 2765 101	Pulley (S)	
57	S49 6726 801	Gear (C)	
58	S49 3310 701	Gear (PL)	
59	S49 3311 201	Disc Table	

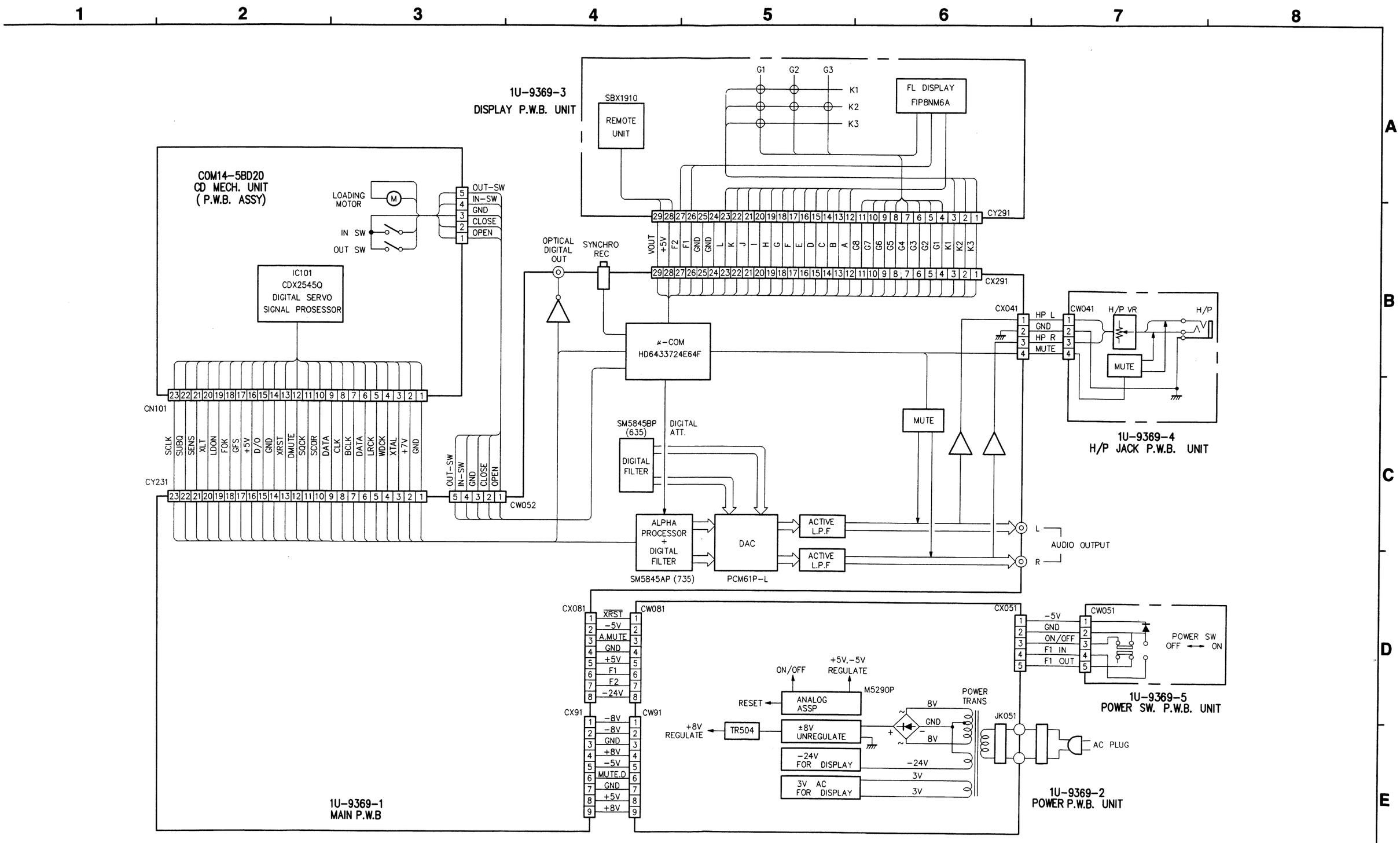
Ref. No.	Part No.	Part Name	Remarks
60	S49 3311 001	Holder (MG)	
61	SA4 6606 52A	Magnet	
62	S49 3313 401	Screw	
63	S49 5999 601	Spring (932)	
64	S49 3312 932	Holder (BU)	
65	S49 2531 531	Damper	
M151	SA4 6606 92A	Motor (L)Ass'y	
#1	471 3201 024	Screw 2.6x4	

PARTS LIST OF OPITAL PICK-UP UNIT

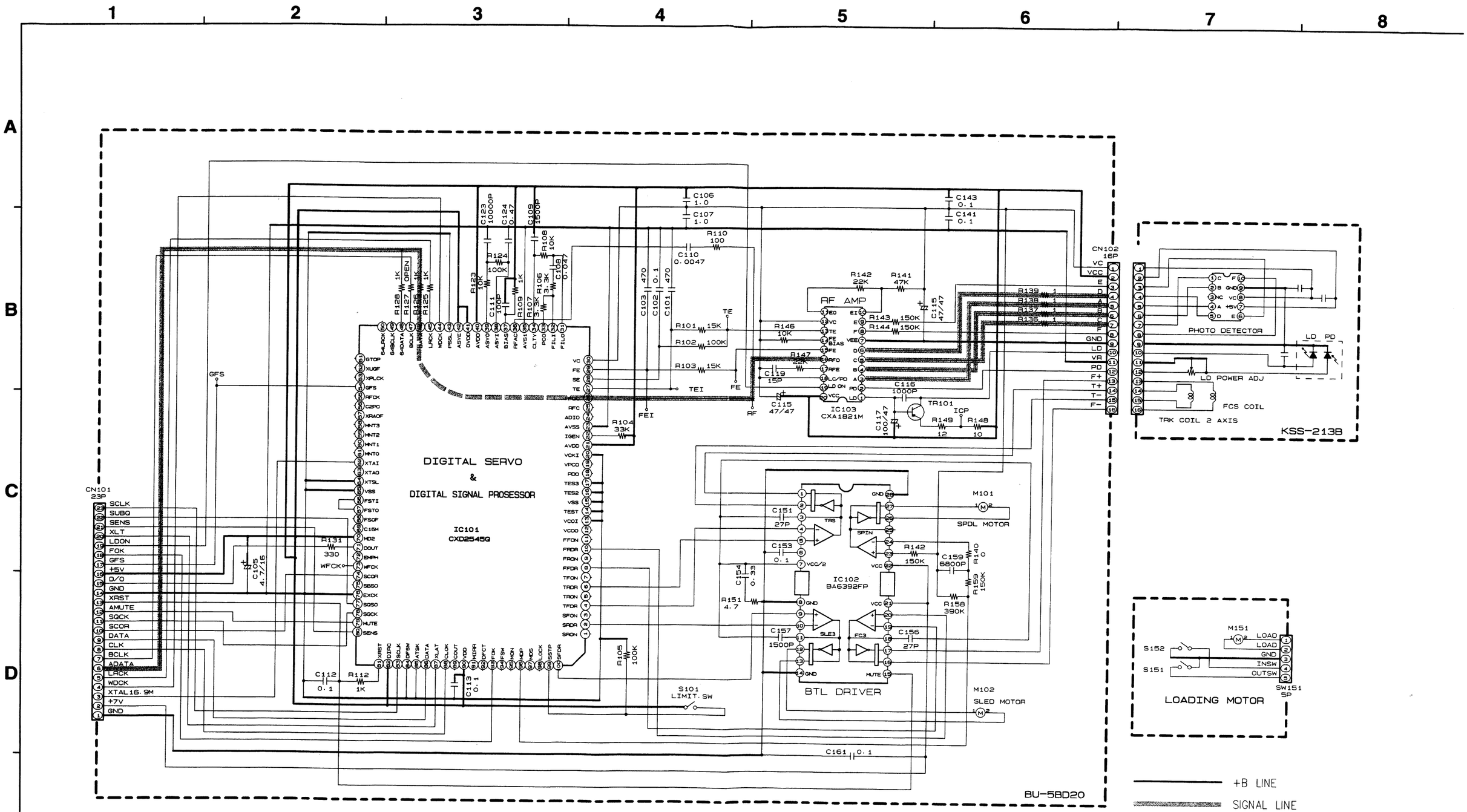
Ref. No.	Part No.	Part Name	Remarks
101	SA4 6735 09A	P.W.B. Ass'y	See Page 26
102	S49 5194 001	Insulator Rubber	
103	S49 1756 501	Sled shaft	
105	S88 4837 831	Optical PU KSS213BA/F-NP	
106	S49 1756 721	Gear (M)	
107	S49 1756 401	Gear (P)	

Ref. No.	Part No.	Part Name	Remarks
108	S17 6906 911	Flat Cable	
M101	SX4 9175 233	Motor (Spindle) Ass'y	
M102	SX4 9175 041	Motor (Sled) Ass'y	
109	S49 5162 001	Screw	
#2	471 1810 019	Screw 2x3	

WIRING DIAGRAM



SCHEMATIC DIAGRAM (1/3)



SCHEMATIC DIAGRAM (3/3)

DCD-635

1U-9369-1
MAIN P.W.B UNIT

IC201
HD6433724

IC301
OPEN

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

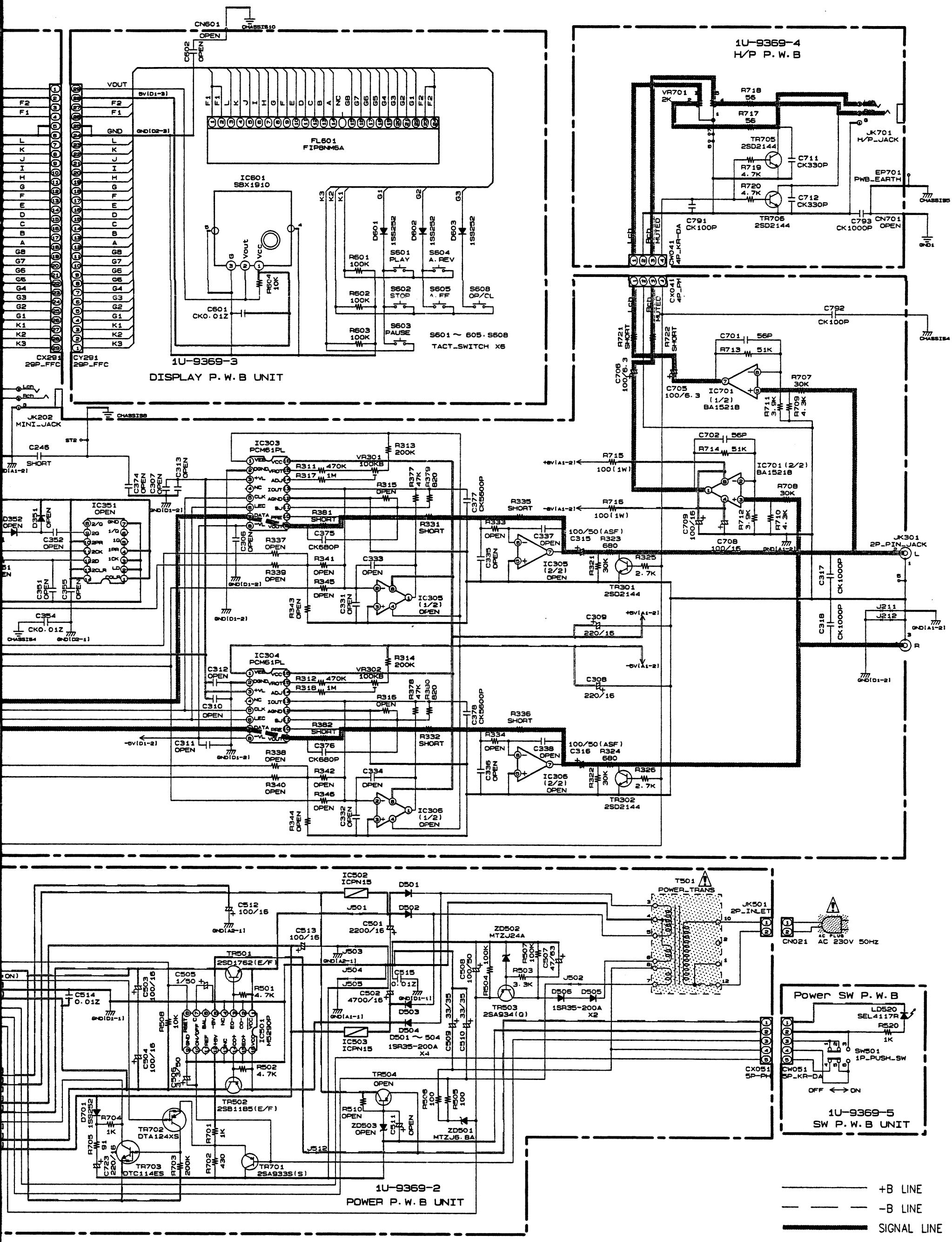
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is detective.

WARNING:

DO NOT return the unit to the customer unit the problem is located and corrected.


1U-9369-4
H/P P.W.B
VR701 2K
R718 56
R717 56
TR705 2SD2144
C711 CK330P
R719 4.7K
R720 4.7K
C712 CK330P
TR706 2SD2144
JK701 H/P_JACK
EP701 PWB_EARTH
C791 CK100P
C793 CK1000P
CN701 OPEN
CW041 4P_KR-DA
CX041 4P_PH
C792 CK100P
C701 56P
R713 51K
C706 100/6.3
C705 100/6.3
IC701 (1/2) BA15218
R707 30K
R711 3.9K
R709 4.3K
C702 56P
R714 51K
IC701 (2/2) BA15218
R708 30K
R712 3.9K
R710 4.3K
C709 100/16
C708 100/16
JK301 2P_PIN_JACK
C317 CK1000P
C318 CK1000P
J211
J212
R715 100(1W)
R716 100(1W)
CX291 29P_FFC
CY291 29P_FFC
CN601 OPEN
C502 OPEN
FL601 FIP8NM6A
IC601 SBX1910
R604 10K
C601 CKO.01Z
D601 1SS252
D602 1SS252
D603 1SS252
R601 100K
R602 100K
R603 100K
S601 PLAY
S602 STOP
S603 PAUSE
S604 A.REV
S605 A.FF
S608 OP/CL
S601 ~ 605.S608
TACT_SWITCH X6
1U-9369-3
DISPLAY P.W.B UNIT
JK202 MINI_JACK
C246 SHORT
IC303 PCM61PL
IC304 PCM61PL
VR301 100KB
VR302 100KB
R313 200K
R314 200K
R311 470K
R317 1M
R312 470K
R318 1M
R315 OPEN
R316 OPEN
R377 47K
R378 47K
R379 820
R380 820
C377 CK5600P
C378 CK5600P
R381 SHORT
R382 SHORT
R331 SHORT
R332 SHORT
R335 SHORT
R336 SHORT
C375 CK680P
C376 CK680P
IC351 OPEN
D351 OPEN
D352 OPEN
C352 OPEN
C354 CKO.01Z
C351 OPEN
C355 OPEN
C306 OPEN
C307 OPEN
C313 OPEN
C374 OPEN
C311 OPEN
C312 OPEN
C310 OPEN
R337 OPEN
R338 OPEN
R339 OPEN
R340 OPEN
R341 OPEN
R342 OPEN
R345 OPEN
R346 OPEN
C333 OPEN
C334 OPEN
IC305 (1/2) OPEN
IC306 (1/2) OPEN
R343 OPEN
R344 OPEN
C331 OPEN
C332 OPEN
C335 OPEN
C336 OPEN
C337 OPEN
C338 OPEN
IC305 (2/2) OPEN
IC306 (2/2) OPEN
R333 OPEN
R334 OPEN
R321 30K
R322 30K
R323 680
R324 680
R325 2.7K
R326 2.7K
TR301 2SD2144
TR302 2SD2144
C315 100/50(ASF)
C316 100/50(ASF)
C309 220/16
C308 220/16
R721 SHORT
R722 SHORT
+8V(A1-2)
-8V(A1-2)
GND(D1-2)
GND(D2-1)
CHASSIS4
CHASSIS5
CHASSIS8
CHASSIS10
IC502 ICPN15
IC503 ICPN15
J501
J502
J503
J504
J505
J512
D501
D502
D503
D504
D501 ~ 504 1SR35-200A X4
D505
D506
1SR35-200A X2
C501 2200/16
C502 4700/16
C503 100/16
C504 100/16
C505 1/50
C506 100/16
C508 100/50
C509 33/35
C510 33/35
C511 OPEN
C512 100/16
C513 100/16
C514 0.01Z
C515 0.01Z
C723 220/16
R501 4.7K
R502 4.7K
R503 3.3K
R504 100K
R505 100
R506 100
R507 100K
R508 10K
R510 OPEN
R701 1K
R702 430
R703 200K
R704 1K
R705 91
ZD501 MTZJ6.8A
ZD502 MTZJ24A
ZD503 OPEN
TR501 2SD1762(E/F)
TR502 2SB1185(E/F)
TR503 2SA934(Q)
TR504 OPEN
TR701 2SA933S(S)
TR702 DTA124XS
TR703 DTC114ES
IC501 MS290P
T501 POWER_TRANS
JK501 2P_INLET
CN021 AC 230V 50Hz
AC PLUG
1U-9369-2
POWER P.W.B UNIT
Power SW P.W.B
LD520 SEL4117R
R520 1K
SW501 1P_PUSH_SW
CW051 5P_KR-DA
CX051 5P-PH
OFF ↔ ON
1U-9369-5
SW P.W.B UNIT
+B LINE
-B LINE
SIGNAL LINE

SCHEMATIC DIAGRAM (2/3)

DCD-735

1U-9369-1
MAIN P.W.B UNIT

IC201
HD6433724

IC301
SM5845AF

X301
16.934MHz

X201
CST4.23MGW040

TR201 2SD1762(E/F)
TR202 2SC2060(Q)
TR203 2SA934(Q)
TR204 DTC114ES
TR205 DTC114ES

IC202 BA15218
IC203 BA15218
IC371 OPEN

CX291 29P_FFC
CY291 29P_FFC
CX081 8P-PH
CX091 9P-PH
CW052 5P_CPNN
CW081 8P_PH-SAN
CW091 9P_PH-SAN
JK201 TOTX178
JK202 MINI_JACK

TO CD MECH
OPT. OUT

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6 7 8 9 10 11

A B C D E F G H

CN601 OPEN CHASSIS10
C602 OPEN
VOUT 5VID1-3I GND GND(D2-3)
F2 F1 L K J I H G F E D C B A NC G8 G7 G6 G5 G4 G3 G2 G1 F2 F1
FL601 FIPBNM6A
IC601 S8X1910 G Vout VCC R604 10K
C601 CKO.01Z
K3 K2 K1 G1 G2 G3
D601 1SS252 D602 1SS252 D603 1SS252
R601 100K S601 PLAY S604 A.REV
R602 100K S602 STOP S605 A.FF S608 OP/CL
R603 100K S603 PAUSE
S601 ~ 605. S608 TACT_SWITCH X6
1U-9369-3
DISPLAY P.W.B UNIT
CX291 29P_FFC CY291 29P_FFC
Lch Rch G JK202 MINI_JACK CHASSIS8
C246 SHORT GND(A1-2)
ST2

1U-9369-4
H/P P.W.B
VR701 2K R718 56 R717 56
JK701 H/P_JACK
TR705 2SD2144 C711 CK330P R719 4.7K
EP701 PWB_EARTH CHASSIS8
R720 4.7K C712 CK330P
TR706 2SD2144
C791 CK100P C793 CK1000P CN701 OPEN GND1
CW041 4P_KR-DA Lch Rch MUTED

CX041 4P_PH
C792 CK100P CHASSIS4
R721 SHORT R722 SHORT
C701 56P R713 51K
C705 100/6.3 C706 100/6.3
IC701 (1/2) BA15218 R707 30K R711 3.9K R709 4.3K
C702 56P R714 51K
IC701 (2/2) BA15218 R708 30K R712 3.9K R710 4.3K
C709 100/16 C708 100/16 GND(A1-2)
+8V(A1-2) R715 100(1W) -8V(A1-2) R716 100(1W)

IC303 PCM61PL VR301 100KB R313 200K R311 470K R317 1M
R315 SHORT R377 47K R379 OPEN
C374 OPEN C307 OPEN C313 OPEN GND(D1-2)
C306 OPEN R337 200K R339 100K R341 200K R345 680K
C333 CQ180P(NH) C331 CQ820P(NH) IC305 (1/2) UPC4570C R343 15
GND(D1-2)
IC304 PCM61PL VR302 100KB R314 200K R312 470K R318 1M
R316 SHORT R378 47K R380 OPEN
C312 OPEN C310 OPEN C311 OPEN -5V(D1-2) GND(D1-2)
R338 200K R340 100K R342 200K R346 680K
C334 CQ180P(NH) C332 CQ820P(NH) IC306 (1/2) UPC4570C R344 15

IC351 TC74HC74AP D352 1SS252 D351 1SS252
C352 CK1500P C351 47P C355 0.12
C354 CKO.01Z CHASSIS4 GND(D2-1)

R335 11K R333 5.6K CQ220P(NH) C337 C335 CQ1000P(NH) 100/50(ASF) C315 R323 680
IC305 (2/2) UPC4570C R321 30K R325 2.7K TR301 2SD2144
R336 11K R334 5.6K CQ220P(NH) C338 C336 CQ1000P(NH) 100/50(ASF) C316 R324 680
IC306 (2/2) UPC4570C R322 30K R326 2.7K TR302 2SD2144
C309 220/16 +8V(A1-2)
C308 220/16 -5V(A1-2)
C317 CQ1000P(NH) C318 CQ1000P(NH)
JK301 2P_PIN_JACK L R GND(D1-2)
J211 J212 GND(A1-2)

IC502 ICPN15 J501 D501 D502
C512 100/16 GND(A2-1)
C513 100/16 C501 2200/16 J503 GND(A2-1) J504 J505
C502 4700/16 GND(A1-1) C515 0.01Z GND(D1-1) D503 D504
IC503 ICPN15 D501 ~ 504 1SR35-200A X4
C508 100/50 C509 33/35 C510 33/35
ZD502 MTZJ24A R507 100K R503 3.3K C507 47/63
R504 100K TR503 2SA934(Q) J502 D506 D505 1SR35-200A X2
T501 POWER_TRANS JK501 2P_INLET CN021 AC PLUG AC 230V 50HZ
CX051 5P_PH

TR501 2SD1762(E/F) C505 1/50 R501 4.7K
C514 0.01Z GND(D1-1)
C503 100/16 C504 100/16 R508 10K
IC501 MS290P R502 4.7K C506 0.33/50
TR502 2SB1185(E/F)
TR504 OPEN R510 OPEN ZD503 OPEN C511 OPEN R506 100 R505 100 ZD501 MTZJ6.8A
D701 1SS252 R704 1K R705 91 C723 220/16
TR702 DTA124XS R701 1K
TR703 DTC114ES R703 200K R702 430
TR701 2SA933S(S) J512

Power SW P.W.B
LD520 SEL4117R R520 1K
SW501 1P_PUSH_SW
CW051 5P_KR-DA
OFF ↔ ON
1U-9369-5
SW P.W.B UNIT

1U-9369-2
POWER P.W.B UNIT

+B LINE
-B LINE
SIGNAL LINE